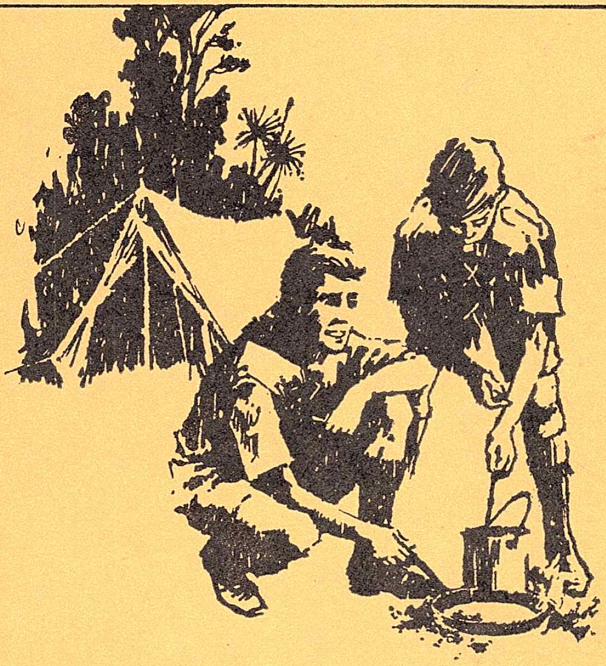
THE NEW ZEALAND SCOUTS HANDBOOK



THE NEW ZEALAND SCOUTS HANDBOOK

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Equipment Branch

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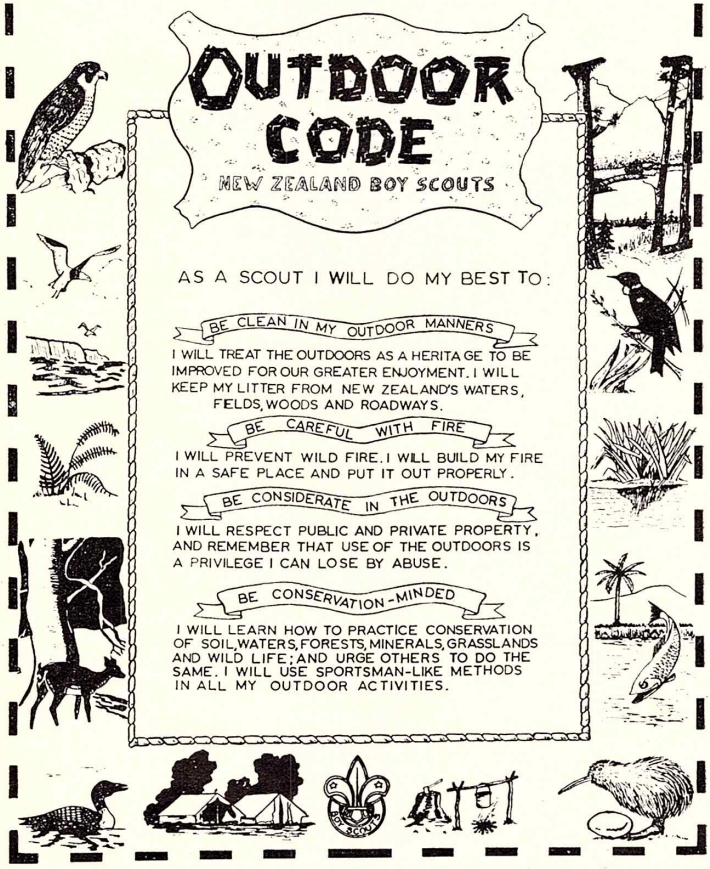

OUTDOOR CODE
NEW ZEALAND BOY SCOUTS
AS A SCOUT I WILL DO MY BEST TO:
BE CLEAN IN MY OUTDOOR MANNERS
I WILL TREAT THE OUTDOORS AS A HERITAGE TO BE IMPROVED FOR OUR GREATER ENJOYMENT. I WILL KEEP MY LITTER FROM NEW ZEALAND'S WATERS, FIELDS, WOODS AND ROADWAYS.
BE CAREFUL WITH FIRE
I WILL PREVENT WILD FIRE. I WILL BUILD MY FIRE IN A SAFE PLACE AND PUT IT OUT PROPERLY.
BE CONSIDERATE IN THE OUTDOORS
I WILL RESPECT PUBLIC AND PRIVATE PROPERTY, AND REMEMBER THAT USE OF THE OUTDOORS IS A PRIVILEGE I CAN LOSE BY ABUSE.
BE CONSERVATION-MINDED
I WILL LEARN HOW TO PRACTICE CONSERVATION OF SOIL, WATERS, FORESTS, MINERALS, GRASSLANDS AND WILD LIFE; AND URGE OTHERS TO DO THE SAME. I WILL USE SPORTSMAN-LIKE METHODS IN ALL MY OUTDOOR ACTIVITIES.

SCOUTING AND YOU

INTRODUCTION TO BOY SCOUTS HANDBOOK

I am very glad you want to be a Scout. I can promise you exciting outdoor activities with a great gang of your fellows who can be relied upon because they have all promised to stick to the rules of the Scout Promise.

I know you are growing up very quickly and I also know that you are surrounded by a host of attractive and interesting things to see, to wear and to do. So many things in fact that I wonder how you can possibly choose which you should spend your time and pocket money on.

One of the wonderful things about Scouting is that you join a Patrol of Scouts who have tried out lots of these things and can discuss them with you and help you to decide which are worth while and which are a waste of time. This is important! You know as well as I do that in this modern world there is not enough T I M E to do all the things we would like so it is important that we spend our time on those activities which in one way or another will help us in the future. Scouting and in particular, this book, give a pointer to these activities and in fact, show you where and how to find them.

As well as the camping and exploring which I know you are looking forward to there is a wide selection of interesting skills and hobbies in which you can prove yourself as good as or better than your friends. Progress in each of these entitles you to a badge or achievement award for your uniform or campfire blanket.

Your handbook has been specially re-written to make these activities and tests quite clear to you and it would be the special wish of the Commissioners concerned that every new Scout like you should thumb through this book and there and then make up his mind to become a First Class Scout.

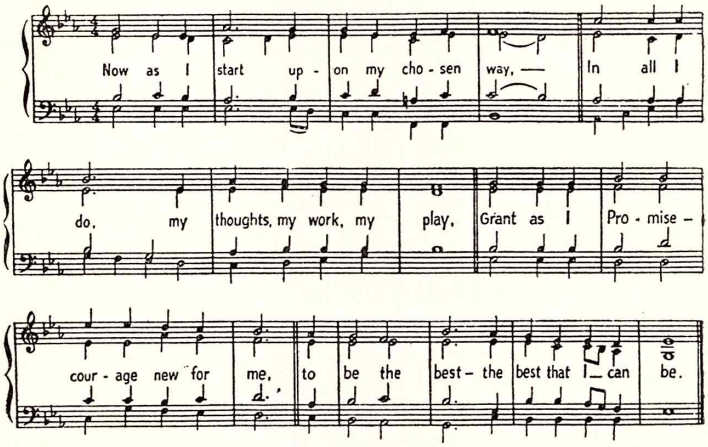
I hope this sounds like fun to you because it is fun if you want it to be and if you enter into it with enthusiasm.

BUT! you ARE growing up and will be a man sooner than you think, so you won't expect to have all this for nothing. For instance, Scouting is expensive just like any other "good thing" these days. You must earn and save money for your uniform, your books, your camps and your troop and Group funds. Don't expect Dad to provide it all. The patrol is a team and **every** member must pull his weight. If you are not prepared to do this right from the start you don't really want to be a Scout.

The rules of Scouting are not harsh but they are strict and apply equally to your life in the patrol and at home and round town. Read the Scout Law carefully and discuss each one with your Patrol Leader and he will explain what they mean. Then try your best to act according to these rules and you can really claim to be that important one who brings the World Brotherhood total one Scout nearer to 11 million active Scouts.

Every other Scout and former Scout everywhere welcomes you and looks forward to meeting you at camps, rallies, jamborees, at college, at university, at work.

Lord Kitchener once said "Once a Scout always a Scout" and you will find that this is so. Welcome, and Good Scouting to you.

THE "BOY SCOUT HYMN"

Now as I start up - on my cho - sen way, — In all I
do, my thoughts, my work, my play, Grant as I Pro - mise -
cour - age new for me, to be the best - the best that I — can be.

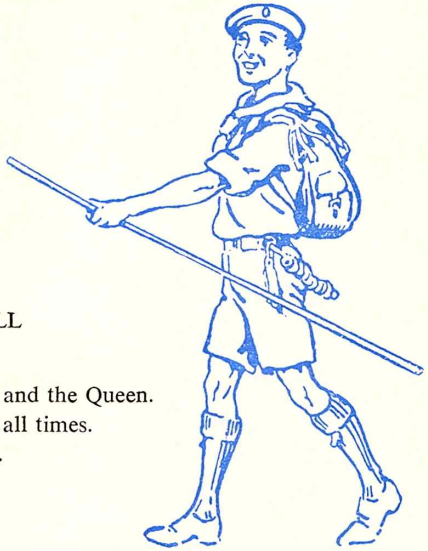
Help me to keep my honour shining bright,
May I be loyal in the hardest fight,
Let me be able for my task, and then,
To earn a place among my fellow-men.

Open mine eyes to see the things as I should,
That I may do my daily turn of good,
Let me be ready, waiting for each need
To keep me clean in thought and word and deed.

So as I journey on my chosen way,
In all I do, my thoughts, my work, my play,
Grant as I promise, courage new for me
To be the best, the BEST that I can be.

—By Ralph Reader.

THE PROMISE



ON MY HONOUR
I PROMISE THAT I WILL
DO MY BEST

To do my duty to God, and the Queen.
To help other people at all times.
To obey the Scout Law.

THE SCOUT LAW

1. A Scout's honour is to be trusted.
2. A Scout is loyal to the Queen, his Country, his Scouters, his Parents, his Employers, and to those under him.
3. A Scout's duty is to be useful, and to help others.
4. A Scout is a friend to all, and a brother to every other Scout, no matter to what country, class or creed the other belongs.
5. A Scout is courteous.
6. A Scout is a friend to animals.
7. A Scout obeys orders of his Parents, Patrol Leader, or Scoutmaster, without question.
8. A Scout smiles and whistles under all difficulties.
9. A Scout is thrifty.
10. A Scout is clean in thought, word and deed.

RIGHT AT THE START

That is what we want you to be—**right** at the start. This is why this book has been written.

This book will help you travel the Scouting Trail that starts at Tenderfoot and goes through Second Class to First Class. It will tell you what you must do with the help of your Scouter and Patrol Leader to pass these tests and be on your way to Queen Scout.

Every Scout will want to become a First Class Scout and there are three trails you will have to follow to become one:

The Tenderfoot Trail.

The Hiking Trail to Second Class.

The Camping Trail to First Class.

All of these trails are concerned with doing things and you will have to practise them often so that you will be able to remember them all. What you must do for each trail is set out on pages 19 to 23 and you should look at them carefully. Did you notice that, at Second Class, you have to repass your Tenderfoot and, at First Class, you have to repass your Second Class? Now you will know why it is important to keep all the skills you have learnt in practice all the time.

Just because it says that you have to repass Tenderfoot, don't think that you can do this easily. Your Scouter will expect you, as a candidate for Second Class, to know a lot more about the Law and the Promise than you knew when you were a Tenderfoot. And so it is with all the tests: although they may seem similar you will be expected to know more and more about them in keeping with your age—and that's only fair, isn't it?

Once you have passed your tenderfoot you can then pass any test you like. That is, you can pass Second OR First Class tests, but remember you must be a Second Class Scout and be over 13½ years of age before you can be First Class.

There are many books about Scouting but the greatest of them all—and the first—is "Scouting for Boys", written by our Founder, Lord Baden-Powell of Gilwell, the Chief Scout of the World. You should have a copy of this book so that you can read about all the exciting things he planned for you and millions of other boys to do.

"B.P." (as we call Lord Baden-Powell) has given **you** the chance to share in the fun and adventure of this great game of Scouting, so make sure you read his book as well as this one.

YOU as a Scout—

Why did you want to join the Scouts?

Perhaps you were looking for fun and adventure. You won't be disappointed—there is a lot of fun ahead for you in hiking and camping and pioneering, camp fires and the dozens of other activities that Scouts enjoy.

Perhaps you were hoping to make some more friends. There will be plenty of chance for this, too, since Scouting is one of the largest boys' movements in the world.

There is something more. You may not have thought of it. The man who started Scouting, Lord Baden-Powell, thought of it.

BADEN-POWELL said:

"I suppose every boy wants to help his country in some way or other. There is a way, by which he can do so easily, and that is by becoming a Scout."

Scouting can help you to become the kind of man New Zealand and the world need: alert in mind, strong in body, earnest in Spirit, honourable in all things.

The Scout Motto is "Be Prepared". Your Scout training will help you to be prepared for any kind of accident or emergency and to serve your country as a useful citizen when you become a man.

YOU and your Patrol

Most of your Scout training will be carried out in your Patrol. This is a gang of six or seven boys, led by one of them called the Patrol Leader. He has a Patrol Second to help him. Your P.L. will teach you many of your Scout tests. The Patrol takes the name of a bird or animal, usually a New Zealand one.

YOU will want your Patrol to be the BEST and here is how you can help:

- Learn something about the habits of your Patrol bird or animal.
- Learn and use your Patrol call.
- Attend Troop meetings and Patrol meetings regularly and ON TIME—if you have to stay away for something very important, ask for leave or tell your P.L. why you can't come.
- Earn your place in the Patrol and work for it.
- Carry out the jobs your P.L. gives you, willingly and with a grin—even if the jobs are unpleasant.
- AND ABOVE ALL.
  Be loyal to your P.L. and help him all you can.

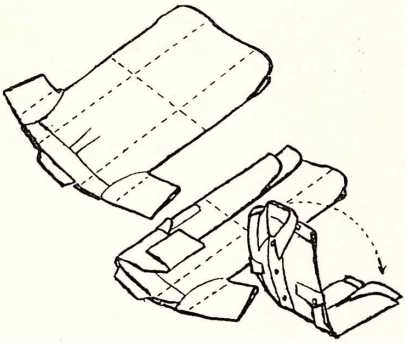
Your P.L. is an important fellow in many ways. As well as leading your Patrol, he and the other P.L.s belong to the Court of Honour.

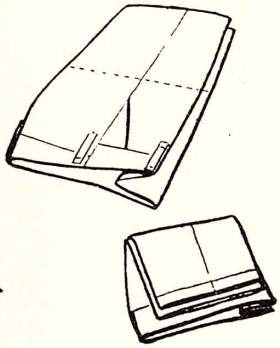
The Court of Honour guards the honour of your Troop and deals with matters like programme, activities, spending Troop funds, appointments and discipline. Your Scoutmaster acts as adviser to the Court of Honour.

YOU and your Uniform

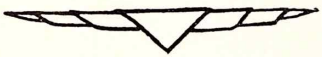
Once you have been invested as a Scout you can wear your Scout uniform. This is part of the thrill of being a Scout. At present about 44,000 boys in New Zealand wear Scout uniforms with pride. The moment you put it on you feel ready for a hike or camp or some other Scout activity. The Scout uniform stands for the brotherhood of Scouting, for the Scout way of life, and for outdoor life. To the public, a Boy Scout uniform proclaims, "Here is a Boy Scout", for people know that only a boy who is a fully-fledged member of the Scout movement has the right to wear its uniform.

As with all your clothes, you should take care of your uniform so that when you wear it you will look smart and bring credit to yourself and every other Scout. The picture shows you how you should fold it after use so that it will always be neat and ready for you to put on. You could perhaps use the same way of looking after all your clothes so that they will always be well cared for.

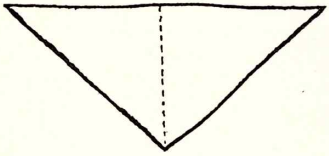


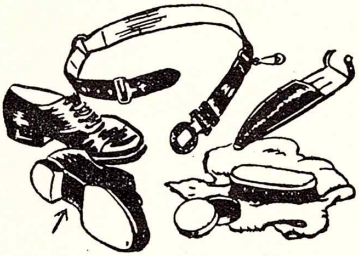


SHIRT AND SHORTS SHOULD BE FOLDED UP WHEN NOT IN USE.

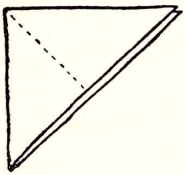


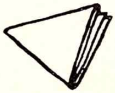
ROLL THE SCARF AFRESH EVERY TIME IT IS PUT ON.



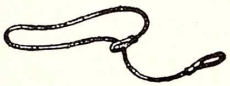


ALL LEATHER ARTICLES SHOULD BE POLISHED REGULARLY... INCLUDING THE ARCHES. DO YOU WATCH FOR THESE POINTS IN YOUR INSPECTION?





THE SCARF WILL ALWAYS LOOK RESPECTABLE IF CAREFULLY FOLDED UP AFTER EACH WEARING.



IF WHITE LANYARDS ARE WORN MAKE SURE THEY ARE WHITE. AN OCCASIONAL SCRUB WILL HELP.

YOU and your Scout Group

You and your Patrol are part of a Scout Troop. This, in turn is part of a Scout Group. The list gives all the sections in your Group. See if you can find out the names of all the Scouters in your Group, and write their names in the spaces.

My Patrol is the ..... Patrol

The members of my patrol are:

.....

.....

.....

.....

..... Patrol 2nd.

..... Patrol Leader

Address .....

.....

Telephone No. .....

My Scouters are:

..... S.M.

Address .....

.....

Telephone No. .....

..... A.S.M.

..... A.S.M.

My Venturer Scout Leader is:

..... V.S.L.

My Group Scoutmaster is:

..... G.S.M.

Address .....

.....

Telephone No. .....

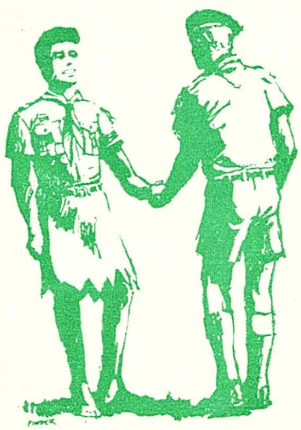
My Troop is part of the ..... District.

YOU and the Scouts of the World

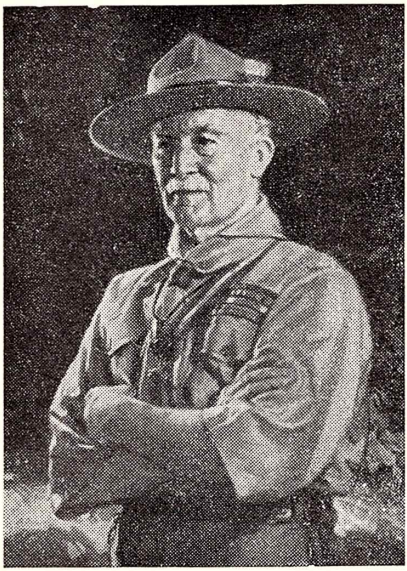
How many are there in your family?

Invested as a Scout, you will become a member of a very large family. You will have about ten million brother Scouts, living in every free country of the world!

Ten million is a very large number. In fact if, like the Scout in the picture, you set out to shake hands with all your brother Scouts in the world, at the rate of one every half-minute, you would be hard at it, day and night, for more than eight and a half years. And as you shook hands you would greet boys of every colour and belonging to all religions—and all of them would have passed a tenderfoot test and made their Scout Promise. Perhaps you will one day have the chance of going to a Jamboree and meeting Scouts from all other countries. Then you will really come to understand what a wonderful brotherhood you have joined.



LIFE OF B.P.



Robert Stephenson Smyth Baden-Powell was born in 1857 the son of Professor Baden-Powell, of Oxford University, who had been a clergyman. His father died when he was three years old and his mother devoted herself to bringing up a rather large family. He and his brothers had no money to buy their pleasures and they were encouraged by their mother to make their own fun. They learned to be thrifty and took great pleasure in outdoor activities. They built boats and sailed them and went on long journeys, learning to look after themselves in much the same way as you will do as a Scout.

B.P. won a scholarship to attend a very famous school called Charterhouse and from there he graduated in 1876 to join the Army in India as a Lieutenant.

His commanding officer encouraged B.P. in his efforts to get his men to be leaders and accept responsibility. So well were his efforts received that his scheme to award an arrow head badge to soldiers who had qualified as Scouts was accepted by the Army. In India he devoted himself to sketching and writing and became so skilful at pig sticking that he won the Kadir Cup.

In 1884 he went to Africa for the first time and carried out reconnaissance work in Natal. Three years in England was followed by a return to Africa, where he took part in the campaign against Dinizulu. In 1890 he was a Military Secretary to the Governor of Malta and later became Intelligence Officer for the Mediterranean.

In 1895 he accompanied the Ashanti Expedition and his ability in pioneering was responsible for the quick end to that campaign. Later he was sent to Matabeleland, and here his scouting skill earned him a great name.

Returning to India in 1897 as a Colonel, he was sent in 1899 to South Africa to organise a police force on the north-west frontier of Cape Colony. He was at Mafeking when the Boer War broke out and he defended that town for seven months against a greatly superior enemy force. His defence of Mafeking made him a hero and he was promoted to Major-General when he was only 43 years of age. B.P. was then asked to form the South African Constabulary, and the training methods he adopted were unorthodox and gave a lead to future Scout training.

After the war he returned to England as Inspector General of Cavalry and after five years became a Lieutenant-General, and his active Army career came to an end.

At this time a new idea, Boy Scouts, was growing, founded on his experiences at Mafeking. He had written a military textbook, "Aids to Scouting", and this had become very popular and used in schools as a method of training in observation and deduction. B.P. felt that some of his scouting practices might prove an additional attraction to youths in the Boys' Brigade, Y.M.C.A. and other organisations. This resulted in the publishing of "Scouting for Boys" in six fortnightly parts after he had tried out his ideas at the first Boy Scout camp on Brownsea Island in 1907.

Once the book appeared, patrols formed of their own accord all over the United Kingdom, making some sort of organisation necessary. B.P. then had to make a choice between his Army career and the Boy Scouts. King Edward VII influenced him in making his decision for the latter, showing his approval by knighting B.P. and agreeing that those Scouts who reached a high standard should be known as "King's Scouts".

B.P. married in 1912 and his wife, Lady Olave, proved a wonderful assistant in his Scout and Guide work. In 1929 B.P. was raised to the peerage and took as his title Lord Baden-Powell of Gilwell, saying, "I regard this as an honour to Scouting, I should like to take the title of Baden-Powell of Gilwell."

Scouting spread rapidly throughout the world and B.P. thought of the idea of having Jamborees to show that the brotherhood of Scouts was a truly international brotherhood.

In 1941 B.P. died in Kenya when he was almost 84 years of age. On his gravestone under the badges of the Scouts and Guides is carved:

Robert Baden-Powell, Chief Scout of the World.

Your Scouter will be telling you more about B.P.'s exciting life and you should try to read some of the books which have been written about him. Here are the names of some of them:

"Two Lives of a Hero"—William Hillcourt and Lady Olave Baden-Powell.

"B-P's Life in Pictures"—published by the Boy Scouts Association.

"The Adventures of Baden-Powell"—Geoffrey Bond.

"Baden-Powell"—Reynolds.

THE LAST MESSAGE

Dear Scouts,

If you have ever seen the play "Peter Pan" you will remember how the pirate chief was always making his dying speech because he was afraid that possibly when the time came for him to die he might not have time to get it off his chest. It is much the same with me, and so, although I am not at this moment dying I shall be doing so one of these days, and I want to send you a parting word of goodbye.

Remember, it is the last you will ever hear from me, so think it over.

I have had a most happy life and I want each of you to have as happy a life, too.

I believe that God puts us in this jolly world to be happy and enjoy life. Happiness doesn't come from being rich, nor merely from being successful in your career, nor by self-indulgence. One step towards happiness is to make yourself healthy and strong while you are a boy, so that you can be useful and so can enjoy life when you are a man.

Nature study will show you how full of beautiful and wonderful things God has made the world for you to enjoy. Be contented with what you have got and make the best of it. Look on the bright side of things instead of the gloomy one.

But the real way to get happiness is by giving out happiness to other people. Try and leave this world a little better than you found it and when your turn comes to die, you can die happy in feeling that at any rate you have not wasted your time but have done your best. "Be prepared" in this way, to live happy and to die happy—stick to your Scout Promise always—even after you have ceased to be a boy—and God help you to do it.

Your friend,

Baden-Powell of Gilwell.

THE TENDERFOOT TRAIL

Just joining a Troop and getting to know the other boys in your Patrol won't make you a Scout. There are skills you must learn and rules which you must know and understand and follow before you can become a fully-fledged member of the brotherhood of Scouts.

You should read the tests laid down very carefully and then get on with the job of passing them. You will get plenty of help from your P.L. and your Scouter, but you must learn and understand them for yourself.

Here is what the rules say . . .

You must satisfy your Scouter that you:

- Know about the adventurous life and achievements of the Founder and something of the history of Scouting.
- That you know the Law and the Promise and can explain their meaning in your own words.
- That you know the meanings of the Scout badge, the Motto, the salute and the handshake, and can explain them in your own words.
- That you know the composition of the Union Flag and the New Zealand Ensign and that you can hoist, break and fly them.
- That you can clean a wound and make and apply a dressing.
- That you can make the woodcraft signs given in Camp Fire yarn 4 of "Scouting for Boys".
- That you can whip the end of a rope.
- That you can tie the following knots and hitches and explain their uses: Reef; Sheet bend; Clove hitch; Round turn and two half hitches; Bowline; Sheepshank.

Ask your Scouter about earning your Duty to God Emblem.

THE HIKING TRAIL TO SECOND CLASS

To become a SECOND CLASS Scout here is what you must do:

HEALTH

- Show how to deal with the following common minor accidents:
  Minor cuts and scratches
  Sprains
  Bruises
  Bleeding from the nose

Stings and bites
Burns and scalds
Avoidance of sunburning

- Demonstrate the use of the triangular bandage as a sling.
- Demonstrate how to summon help and treat for shock (not electric).
- Know the general rules of health as given in Camp Fire Yarn No. 18 of "Scouting for Boys".
- Demonstrate the six exercises described in Camp Fire Yarn No. 17 of "Scouting for Boys".
- Swim 10 yards. If a doctor certifies that bathing is dangerous for you, this test is omitted.

OBSERVATION

- Kim's game:
  Describe in writing 16 out of 24 well assorted articles following one minute's observation; OR Follow a trail half a mile long, containing not less than 30 woodcraft signs, in 25 minutes.
- Be able to recognise and name, from a list submitted by you, six common trees, and know the values of their woods for fires.

PIONEERING

- Knots:
  Tie the timber hitch and the fisherman's knot.
- Whipping:
  Do a sailmaker's whipping.
- Lashings:
  Demonstrate square and diagonal lashings by constructing a trestle of Scout staves.
- Know the safety rules and care of hand axe and knife.
  Demonstrate how to chop firewood.

SIGNALLING

- Know the Morse or Semaphore sign for every letter of the alphabet and for numerals as well as the more usual special signs.
- Be able to send and receive a simple message accurately out-of-doors.

EXPLORING

- Know the 16 points of the compass and how to set a map.
- Lay a fire of natural materials out-of-doors; light using not more than two matches; over such a fire cook porridge for two and a twist or damper; a quarter of a pound of meat and two potatoes, and make tea or cocoa.

PUBLIC SERVICE

- Show that you understand the Road Code as it applies to cyclists and pedestrians.
- If you own a bicycle, demonstrate that you are maintaining it properly and that you are able to effect minor repairs.

JOURNEY

- Go by day, with another Tenderfoot Scout, a journey of eight miles. Your route will be laid down by your S.M. and you will be given something to do. A verbal report, from notes, will be made to your S.M. as soon as you get back.

THRIFT

- You must understand the meaning of thrift in all things and show that you are carrying it out in practice. You must show that you have made a sustained effort to save money and to take care of your scout uniform and equipment.

SERVICE

- You must have had at least three months' service as a Scout.

Finally—

- You must repass your Tenderfoot.

Ask your Scouter about earning your Duty to God Emblem—Second Class.

THE CAMPING TRAIL TO FIRST CLASS

To become a FIRST CLASS Scout here is what you have to do:

PRELIMINARY

- You must be at least 13½ years old and have passed the Second Class Badge.
- You must have camped as a Scout for a total of 10 nights before completing your First Class tests. One weekend camp must be included in the total.

HEALTH

- Demonstrate the proper method of dealing with the following emergencies:
  Fire
  Drowning
  Ice-breaking
  Electric shock
- Know how to recognise and deal with external bleeding from veins or arteries.
- Demonstrate how to deal with fractures of the collar-bone, arm and forearm.
- Understand the importance of not moving other suspected fractures.
- Demonstrate the use of the triangular bandage as applied to the head, foot and knee.

- Demonstrate how to deal with shock.
- Swim 50 yards. If a doctor certifies that bathing is dangerous to your health, your Scouter will tell you about an alternative test.

OBSERVATION

- Read the meaning of a series of simple tracks made in sandy or other suitable ground. These shall include running, limping, carrying a weight, walking backwards and blind gaits.
- Be able to recognise and name, from lists you will give to your Scouter, 12 trees, preferably native, common to your locality, and know their utility value and burning qualities.
- Be able to recognise six birds (including sea birds) common in your locality.
- Be able to estimate numbers and, using an improvised apparatus such as a Scout staff, estimate three distances not more than half a mile, and three heights not more than 100 feet. In each case your estimate must be within 10 per cent.

PIONEERING

- Demonstrate the practical application of the following:
  Sheer lashing
  Back splice
  Eye splice
  Fireman's chair knot
  Man harness knot
  Rolling hitch
- Use a felling axe for felling and trimming light timber, or if this is impracticable, be able to log up a piece of timber and demonstrate the theory of felling a tree, and use a bush or cross-cut saw.
- Demonstrate the care and maintenance of an axe.

SIGNALLING

- Send and receive a message out-of-doors, either in semaphore, at rate four (20 letters a minute), or in Morse, at rate three (15 letters a minute). You must also understand the alphabetical check for numerals.

  Where it is desired to pass the test in Morse, using a buzzer, the test may be taken indoors provided that both the sender and the receiver are out of sight of each other.

PUBLIC SERVICE

- Show that you understand the Road Code.
- Demonstrate the principles of controlling traffic.
- If you have a bicycle, demonstrate that you are keeping it properly maintained and that you are able to effect reasonable repairs.
- Understand the procedures for reporting road accidents.

EXPLORING

- Whilst in camp prepare, with assistance, and properly serve a three-course meal (two of the courses to be hot) sufficient for yourself and at least three other Scouts.
- Read and be able to use a one-inch Lands and Survey map (or its local equivalent).
- Use a compass and point out a compass direction by day and night without the aid of a compass.

JOURNEY

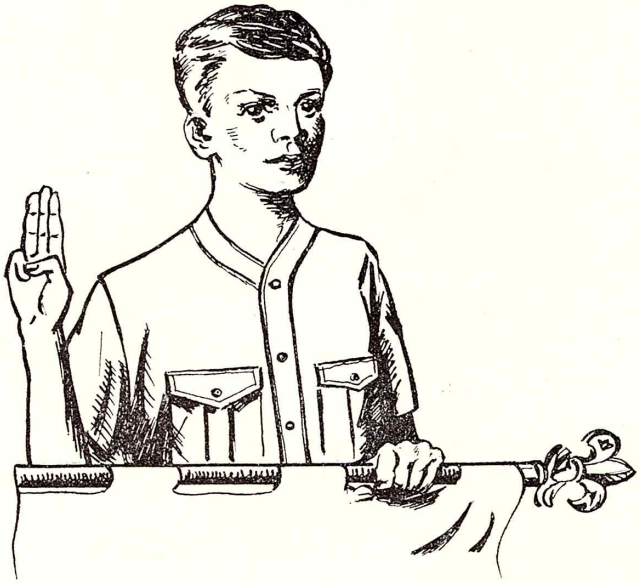
- Go on foot, with two other Scouts, a 24-hour journey of at least 14 miles. In the course of the journey you must cook your own meals, one of which must include meat, over a wood fire in the open; find your camp site and camp for the night.
- You must carry out any instructions given you by your examiner as to things to be observed en route and make a log of your journey.
- You must hand to the examiner, within a week of your return, your complete log, together with any rough notes made on your journey.
- If you are a Sea Scout you may do your journey partly by water and partly by land—at least 5 miles of the 14 to be done on foot.
- This test will be taken last.

Finally

- You must repass your Second Test.

Ask your Scouter about earning your Duty to God Emblem—First Class.

law and promise



THE LAW AND THE PROMISE

Scouting is a game and, like every other game, it has rules which must be followed. It really isn't much fun to play games without rules. Even those games you make up with your friends will have their rules, as without them you won't know what you can or cannot do. The game of Scouting, as played by the millions of boys who are in the brotherhood of Scouts, has really only a very few rules, but they are all important. These rules are the Law and the Promise. To pass the first test on the way to Tenderfoot you must be able to recite the Promise and Law by heart and explain their meaning to your Scouter in your own words. Everyone in Scouting, your P.L. and your Scouter, and all the others have accepted the Promise and the Law. At first you won't be expected to understand them as well as you will when you are a Queen Scout, but you have to try very hard to understand them and, even more important, to try and live up to them.

THE SCOUT PROMISE

On my honour, I promise that I will do my best—
To do my duty to God, and the Queen,
To help other people at all times,
To obey the Scout Law.

WHAT IS YOUR HONOUR?

A boy is not a Scout because he wears the Scout uniform, but because he does his very best to keep his Promise.

Throughout history good men have lived by rules which they have adopted. They were not forced to accept these rules but did so because they knew that by living up to them they would be better and more useful men. These are the kind of men B.-P. calls Scouts, even though they lived a long time before he founded your movement. Some of these men were the knights of old who accepted the rules of Chivalry as their Law. To prove to everyone they had accepted these rules they wore on their shields a device—that is, a personal sign—like your Patrol emblems—which showed they were knights, just as you and all the other Boy Scouts of the world wear the Boy Scout badge to prove they are living by the Scout Promise and Law. You should read what B.-P. has to say about them in Camp Fire Yarn number 2 in "Scouting for Boys".

Their habit of practising these rules came to be called their honour, just as we now call men, who are upright and honest, honourable men. These are men who can be trusted not to do anything dishonourable such as taking an unfair advantage of a weaker person, or telling a lie or not doing what they have said they would do.

Did you know that Her Majesty the Queen has a very special honour which she bestows on the very best men of our time? It is called the Companionship of Honour and there can be only 65 members of it at any one time. When you remember that Sir Winston Churchill was one of them, you can see what sort of men they are, men who will serve Her Majesty loyally and truly.

As you go further along the Scouting Trail you will come to understand more and more about your honour and how important it is for you to be a man of honour: a person on whom other people can rely; a man who won't do anything dishonourable; a man who does what he says he will do.

It is because you have promised on your honour to put the Promise and Law before you as a guide that you are a Scout. Only by doing your best to carry them out will you remain a Scout; and your Scouter and Patrol Leader will help you to live up to them.

DUTY TO GOD

Do you know what duty is? It means something an honourable person is bound to do. In some things you can please yourself. For example, you can please yourself whether or not you play football; but if you have a **duty** to do something this means you must do it as well as you can. What duty do we owe to God? First you have a duty to learn from your parents and your Church to love God and to do His will. You then have the duty to carry these teachings into every part of your life and to worship God as your Church tells you to do.

Everyone has a duty to do these things but because you are a Scout you will want to do that little bit extra. You should aim at getting your Bronze Bar of the Duty to God emblem at the same time as you get your Tenderfoot.

DUTY TO THE QUEEN

Her Majesty Queen Elizabeth II is Queen of New Zealand as well as other parts of the British Commonwealth. This means that she is the head of our country. Your duty to the Queen reminds you of your duty to New Zealand. You will be loyal to New Zealand by obeying its law and by being thankful for all the good things that have been done for you by all the people of New Zealand. It also means that you must do your best to keep these things and to do your part in adding to them.

TO HELP OTHER PEOPLE

There is always someone who wants a hand, who needs your help, and as a Scout you will undertake to help as a service. This is why a Scout is asked to do a good turn every day, and you will find a lot of happiness in doing so. Remember that good turns are things which you do not have to do, but are things you will do because you are a Scout. They are easy to find; you could help dry the dishes without being asked; you could clean the car as a way of saying thank you to your parents; you could run a message for an old lady in your street; and you can think of many more similar things to do. Whatever you do—do it without payment. Once you get into the habit of looking for good turns you will be surprised how easy they are to find. Now you will want to be a first class Scout one day, and then you will not only **want** to help people but will know **how** you can help them. You may never know just how much your good turn can help others. Ask your Scouter to tell you how Scouting was taken to the United States.

TO OBEY THE SCOUT LAW

You will see that there are 10 Laws and you will wonder why they are called the Scout **Law.** The reason is very simple—they are all part of the Scout Law, and this means that we have to try to obey them all. You can't just say that you will carry out **some** of them, because as a Scout you must try to carry them all out. The Scout Law is the thing on which the whole Scout movement is built and sets out the ideals which a Scout strives to attain. As the Scout Law becomes **your** code and as you want to carry it out, you will lead a very happy and useful life.

1. A Scout's Honour is to be Trusted

If a Scout's honour can be trusted, he is the kind of boy on whom everyone can rely. There is no need for parents, teachers or Scouters to check up on him and see that he is doing his job or is telling the truth. They can rely on him not to let them down. This doesn't mean that you won't do anything wrong—boys, like other folk, do, but it does mean that you will own up and will tell people what you have done before they ask. If your cricket ball breaks a window, or if you push Mum's best vase over, or if you damage someone else's bicycle, your honour should see that you will not try to hide what you have done and will do all you can to fix it up.

It goes even further. It is only because a Scout's honour can be trusted that your Scouter is able to let you go hiking or camping without him—he knows that he can rely on you to carry on just as if he were there. And remember, if you don't do this you will have let yourself and your Patrol and all your brother Scouts down.

2. A Scout is loyal to the Queen, his Country, his Scouters, his Parents, his Employers, and those under him

Being loyal to people means that you are on their side, and that you show them that you are when the chance offers. It is easy to be loyal when things are going well. The real test of loyalty comes when they are in trouble or when hard work is involved. Remember that the success of your Troop and your Patrol depends upon your loyalty to them and you should be sure that you are a good team man to both your Patrol and your Troop. Another word for loyal is faithful, and a loyal or faithful chap never lets anyone down.

3. A Scout's Duty is to be Useful and to Help Others

Being useful isn't just wanting to help people—it's that, of course —but you need to know **how** to help them. A Scout must **be prepared**—that is, he must be **ready** and **know** how to help people. Of course, there are lots of ways of helping people, such as paying attention to your lessons, doing your homework and helping your teachers and class-mates. At home you should come to meals on time, help with the washing up, keep your room tidy. As well as doing these things a Scout must be ready at all times to help people in trouble, and part of this is to learn how to help them. The sooner you become a first class Scout the sooner will you be really able to help.

4. A Scout is a Friend to all and a Brother to every other Scout, no matter to what Country, Class or Creed the other may belong

This is part of the adventure of Scouting. Every boy in the world who is a Scout is **your** brother. It doesn't matter whether he is an American, an English boy, an Indian, or an Eskimo, he is simply **your** brother Scout. He has promised to obey the Scout Law. As well as being a brother to every other Scout, a Scout is friendly towards everyone. A ready smile and a helping hand are all you need. Even if you can't speak a person's language you can show him that Scouts are friendly fellows.

5. A Scout is Courteous

This is another way of saying that you should be a gentleman. First of all, you should be courteous in your home. A "please" and a "thank you" are easily said and little, helpful things easily done, yet they make your mother and father feel that you really appreciate what they do for you. By being polite and good mannered you will bring credit to your movement, as people can see what sort of fellow you are. To be courteous you have to consider the wishes of other people—you should, for example, open a door for a lady and give up your seat in a crowded bus. Being courteous is not merely being polite: it means of course that a Scout is polite and also that he is willing to do something to help others.

6. A Scout is a Friend to Animals

If you have a dog or a cat you are probably kind to it already, and will see that it is well cared for and give it food and shelter.

As a Scout you will be out of doors, and so will come to know animals and birds in their natural surroundings. You will hear the birds' chorus at dawn and you will come to regard them as your friends and will protect them all you can. No good Scout would kill or injure birds, or rob their nests.

Sometimes it is necessary to kill animals either for food or because they have become harmful pests. If you have to do this you should be careful to see that you do it as humanely as possible so that it will not suffer unduly.

7. A Scout Obeys Orders of his Parents, Patrol Leader or Scoutmaster Without Question

A Scout will obey an order even if it is inconvenient. Obedience to orders is the basis of discipline, and there are times when failure to obey an order can get you and others into trouble. If your P.L. tells you not to go swimming alone and you do, you may get into trouble, and this may mean that someone else has to help you, even to the extent of risking his own life. Safety in the mountains may well depend upon your obeying the orders of your leader **without question.**

If you consider that an order was unreasonable you may make a quiet protest about it, in private, to the person who gave the order,

but only **after** you have carried the order out, so long as the order is a proper one.

8. A Scout Smiles and Whistles Under all Difficulties

Smiling and whistling are signs of being cheerful. Even in the most difficult situation, if you look hard enough (and sometimes you have to look very hard) something can be found to be cheerful about. Under any annoying circumstance you should force yourself to be cheerful, and then you will find how quickly your annoyance fades away. Above all, you must remember never to become a grumbler.

9. A Scout is Thrifty

To be thrifty means to make the best possible use of the money, things and time we have, so that we do not waste them. You should spend your money wisely on things you really need. Time can be even more precious than money and you should see that you spend your leisure doing something useful. You should be thrifty with your time and divide it carefully between the things you have to do—helping about the house, doing your homework, developing your talents, doing your Scout work—so that you have time for all of them and that you don't let any one of them take all of your time. You should be especially careful with the things you use which belong to other people. Look after your patrol gear; if you borrow anything, take better care of it than you would if it were your own.

10. A Scout is Clean in Thought, Word and Deed

A Scout keeps his clothes clean, his body clean, and his mind clean. There is no need to worry about getting dirty when playing or working, provided you are prepared to clean up thoroughly afterwards.

Keeping a clean mind doesn't mean that you will be able to keep right away from everybody that acts in an unmanly way. That would be impossible, but you do not have to imitate them, or stay in their company, or accept their standards of speech or conduct.

scout signs

B.P. adapted the Scout badge from the north point of the old mariners compass. The design is often called a fleur-de-lis, but it goes so far back in history that we cannot say whether it was meant to represent an arrow head or a flower.

Whatever its origin, B.P. says:

It is the badge of the Scout because it points in the right direction, and upwards. It shows the way in doing your duty and helping others.

The triple head reminds us of the three parts of the Promise, with the duty of God in the centre as the arrow point. The Scout badge incorporates two stars with five points on each. They remind us of the ten Scout Laws and also of the Scout's outdoor life.

Finally, you should remember that the Scout badge is used in countries around the world as a mark of the Scout brotherhood, and the band around it reminds us of this bond.

THE MOTTO

The Scout Motto is "Be Prepared". Like the badge, it was chosen by B.P. and there must have been a twinkle in his eye as he realised it began with his own initials. Here is what he said about it:

The Scout's Motto means that a Scout must always be prepared at any moment to do his duty, and to face danger in order to help his fellow-men.

He must prepare himself by previously thinking out and practising how to act in any accident or emergency, so that he is never taken by surprise: he knows exactly what to do when anything unexpected happens.

The scroll is turned up at the ends like a a Scout's mouth, because he does his duty with a smile, and willingly. The knot is to remind the Scout to do a good turn to someone daily.

HOW TO MAKE THE SCOUT SIGN

Hold the fingers of your right hand like the illustration at the right. The three fingers are like the three points of a Scout's Badge.

They should remind you, each time you make the salute or the Scout sign, of the three parts of your Scout Promise:

1. To do your duty to God, and the Queen.
2. To help others.
3. To obey the Scout Law.

The Scout Sign is used when the Scout Promise is made.

Scouts carrying staves make the Scout sign like this using their **left** hand:

THE SALUTE

B.P. said:

A salute is a sign between men of standing. It is a privilege to be able to salute and there is nothing slavish about it.

Friends like to greet each other. If you see a friend across the street, you greet him by waving. This is a simple kind of salute. Scouts have their own special way of saluting their brother Scouts. When you are invested as a Scout you will be able to greet other Scouts in this special way.

When you are in uniform and not carrying a staff and whether you are wearing a hat or not, you make the salute as shown in the illustration.

First make the Scout Sign with your right hand and then bring it up smartly in a wide outward sweep, hold it at the band of your beret for a second or two—then bring it down smartly, the shortest way.

If you are carrying a staff, which will be in your right hand, you will have to salute with your **left** hand.

WHEN AND WHERE TO SALUTE

As a Greeting:

Whenever you see any other person wearing a Scout badge or uniform, whether you know him or not—always try to be the first to salute.

As a sign of Respect:

At Flag break.

When the National Anthem is played.

When the National Flag is carried past in a parade.

When a funeral procession passes.

THE HANDSHAKE

Scouts shake hands with the left hand—the hand nearest the heart, the hand of friendship.

flags

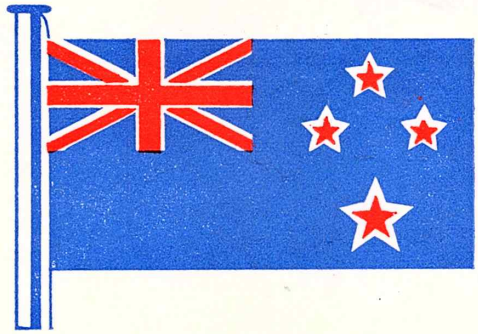
THE NEW ZEALAND FLAG

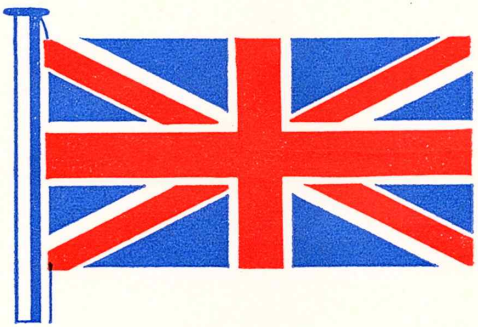
As with some other parts of the Commonwealth, for example Australia, New Zealand has kept the Union Flag as part of our national flag.

The New Zealand Flag is a blue flag with the Union Flag in the top inner corner. It has four stars in red outlined in white which represent the stars of the Southern Cross.

The New Zealand Ensign was adopted by the New Zealand Parliament in 1901 and the Royal Assent to its adoption was given in 1902.

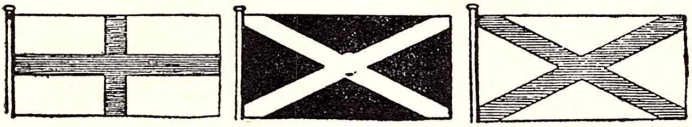
This is the flag that all New Zealand Scouts should use.





THE UNION FLAG

The Union Flag is the national flag of the United Kingdom and the British Empire. It is made up of the old national flags of the three former kingdoms, England, Scotland and Ireland.

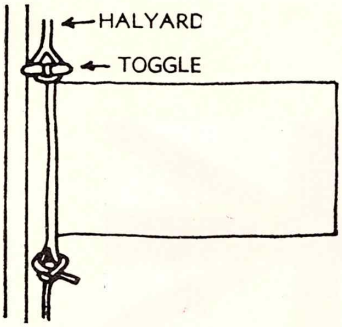


ENGLAND (red cross on white) | SCOTLAND (white cross on blue) | IRELAND (red cross on white)

In 1606 King James VI of Scotland became King James I of England and the flags of England and Scotland were combined. In 1801 the flag of Ireland was added to the other two, which then became the Union Flag.

You must be sure to fly the Union Flag the right way up; otherwise it is a sign of distress. Your P.L. will tell you how to know when it is the right way up. The Union Flag is often called the Union Jack.

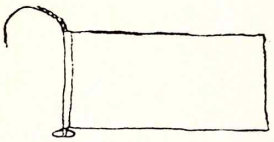
HOW TO HOIST A FLAG



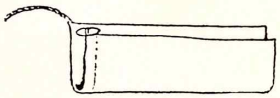
Flags which are strung together or hoisted up a flagpole, have a short rope sewn into the edge nearest the pole. On the upper end of the rope is a wooden toggle, while at the lower end there is a spliced eye; it is by means of these that flags are fastened to one another or to the halyard.

HOW TO "BREAK" A FLAG

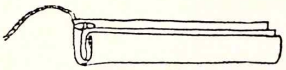
This may seem harder to tell you how to do it than it is to do. It is one of the things which your P.L. will show you and once you learn you should ask to break it at flag break when your patrol is the duty patrol.



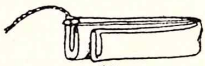
1. Start like this.



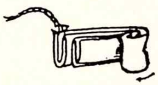
2. Fold it lengthwise once.



3. Fold it lengthwise again.



4. Bring the two ends together.



5. Now roll it like this.

6. It is kept bundled by winding the rope under itself.

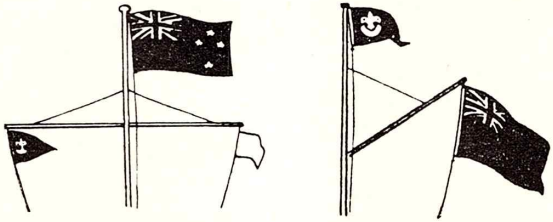
Attach the toggle to the upper end of the halyard. Hoist the flag until it reaches the top of the mast, where it is held firmly while the flag is "broken" by giving the halyard a sharp tug. The person who breaks the flag then makes the halyard fast and steps back and salutes. If you are on parade when the flag is "broken", you too should salute taking your time from the "breaker".

The flag should only be flown outdoors between 8 a.m. and sunset. At flag down, it should be lowered steadily to the ground, but it must never be allowed to touch the ground. You should catch it in your hand as it nears the ground. The Scout custom is that you do not salute as the flag is lowered.

Your Troop will probably start its meetings with flag break and finish it with flag down. This is done to show the beginning and end of the Scout "day". The same rules apply to hoisting, breaking and saluting the flag as if it were being hoisted and broken out of doors.

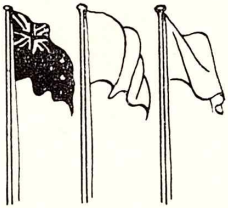
In New Zealand the New Zealand Ensign is always flown at the top of the highest mast or at the left of a number of flagpoles which are the same height. No other flag should be flown above the New Zealand Ensign.

HERE IS HOW YOU SHOULD FLY IT

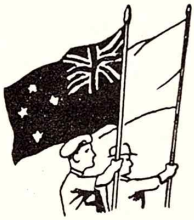


When the New Zealand Ensign is flown on a flagstaff with cross-bar or gaff the positions of the flags shall be as shown above.

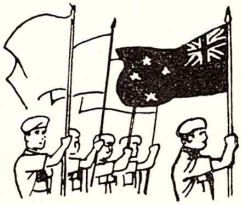
Do not place any other flag above the N.Z. Ensign.



When flags of two or more nations are flown use separate staffs of the same height.

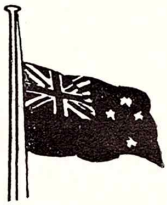


In processions, carry the N.Z. Ensign on the marching right.



When several flags are carried abreast, carry the N.Z. Ensign in front of the centre of the line.

If the New Zealand flag is flown at "half-mast" it is a sign of mourning. If you have to break a flag in this case you break it at the top of the pole and then lower it the width of the flag and make the halyard fast. To lower a flag flying at "half-mast" you hoist it to the top of the pole and then lower it in the usual way.



first aid

HELPING THE SICK AND INJURED

Because you are a Boy Scout you have a duty to help people, and you will want to know what to do to help them when they are sick or injured.

As with everything else, there are some rules which you should learn right at the start. Here they are:

- Don't give any treatment you have not been taught.
- If the accident looks serious send for a doctor, and remember to tell him as well as you can what you think is wrong. As you read this section you will soon come to understand what is a serious accident.
- If it is a minor accident, take or send the patient to a doctor as soon as possible.
- Remember to keep as cool as you can, and it is an accident that occurs when you are out with your Patrol, let your Scouter know about it as soon as you are able.

Plan of action:

In any emergency it is necessary for you to have a plan of action—that is, to know what to do and in what order to do it. Read Camp Fire Yarn No. 23 in "Scouting for Boys".

B.P. said:

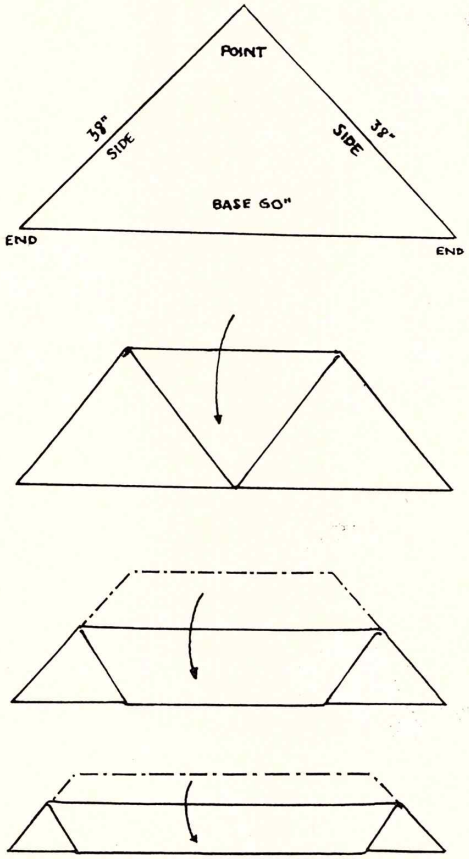
The great thing for you Scouts to bear in mind is that wherever you are and whatever you are doing, you should think to yourselves, "What accident might occur here?" and, "What is my duty if it occurs?" You are then prepared to act.

Here is an action plan when someone is injured:

- Stop bleeding.
- Send for help.
- Make sure the casualty is breathing properly, remove any obstruction to breathing, keep crowds away, see there is plenty of fresh air.
- Make sure the patient is resting comfortably.
- Don't do anything until you know what is wrong.
- Keep patient warm and treat shock.
- Remove cause of accident.
- Give any special treatment you can.
- Don't move the patient until you are sure it is safe to do so.

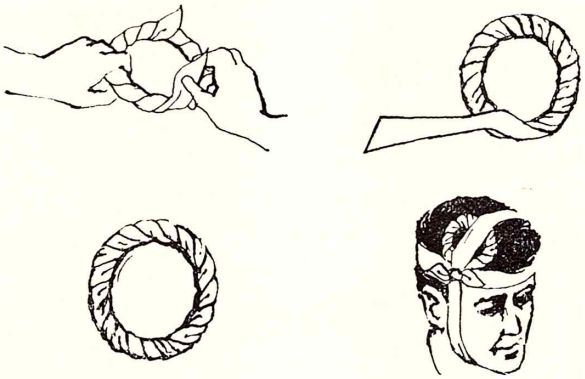
Of course, all of these things may not be necessary in all accidents but learn them by heart and check them off as you go.

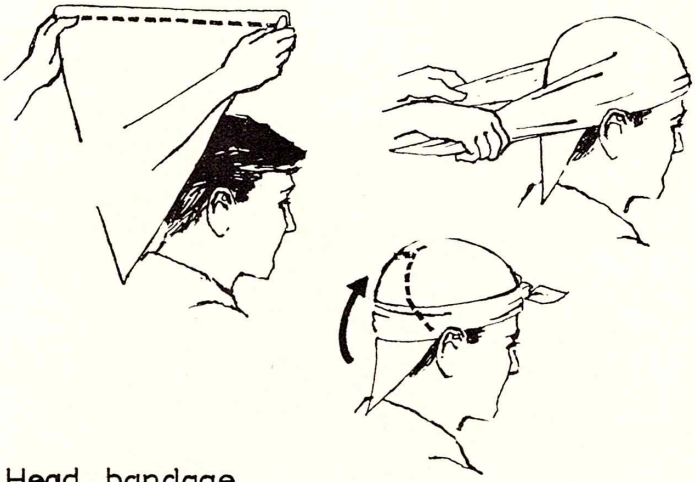
Finally, you should remember that if an adult first aider is there you should offer to assist him and you should not try to take over the casualty.



Triangular bandage

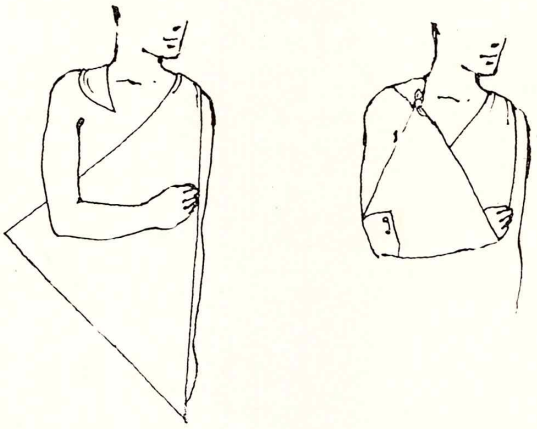
Ring pad scalp wound



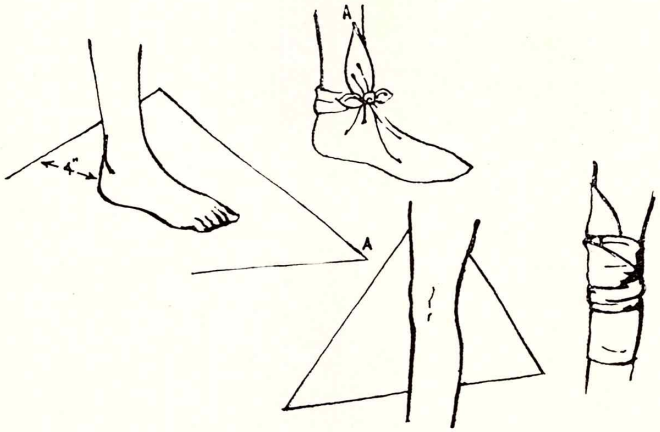


Head bandage

Arm sling



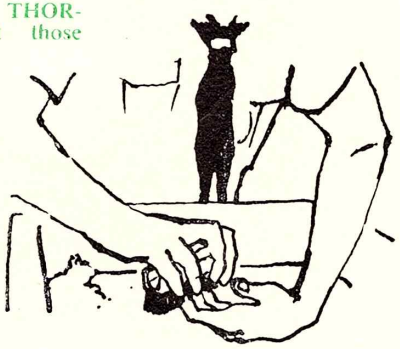
Foot and knee bandage



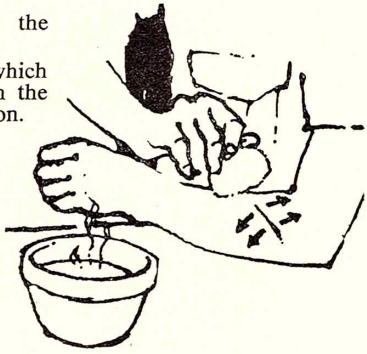
TO CLEAN A WOUND AND APPLY A DRESSING

1. THESE WOUNDS NEED A DOCTOR'S CARE:
   - Deep wounds with gaping edges.
   - Puncture wounds (tetanus germs may be carried deep inside).
   - Wounds with severe bleeding.
   - Wounds in dangerous areas, such as chest and face.
   - Wounds where there is any possibility of dirt or broken glass being present.

2. CLEAN YOUR HANDS THOROUGHLY. Don't forget those fingernails.

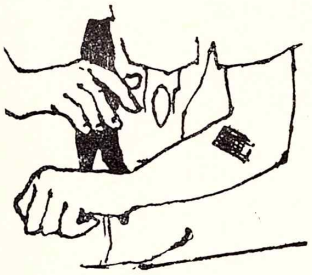


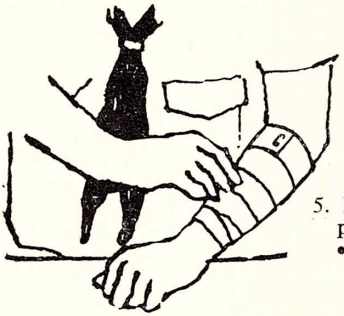
3. CLEAN THE WOUND.
   - Use swabs (cotton wool) dipped in warm water containing antiseptic—clean soapy water does very well.
     Always wash away from the wound.
   - The antiseptic kills germs which may enter the body through the wound and so cause infection.



4. APPLY A DRESSING to keep germs from the wound.

- A proper dressing is a piece of gauze material sterilised to free it from germs—your First Aid Kit should have some, each in its own germ-proof envelope.
- In an **emergency** a clean handkerchief or piece of linen can be used—it would be wise to soak any of these in antiseptic solution.





5. BANDAGE to keep the dressing in place.
   - Use a roller bandage, sticking plaster or your Scout scarf—the bandage must not touch the wound—it must be firm to control bleeding.

6. REMEMBER—there are three main things to be done:
   Clean the cut.
   Cover it to keep out germs and dirt.
   Rest the injured part.

Two things to do:

1. Ask your mother if you have had your tetanus injections, and if you have not had them and she agrees, ask her to arrange them for you. They will help keep you safe while you are hiking and camping.
2. Ask your P.L. what you should keep in your own First Aid Kit. Now that you can dress a wound, keep the things you need with you. Keep kit small and clean. You'll need it for your Second Class hike test.

SPRAINS

A sprain is caused by a sudden jerk, which stretches, or even tears, some of the ligaments around a joint.

The signs of a sprain are:

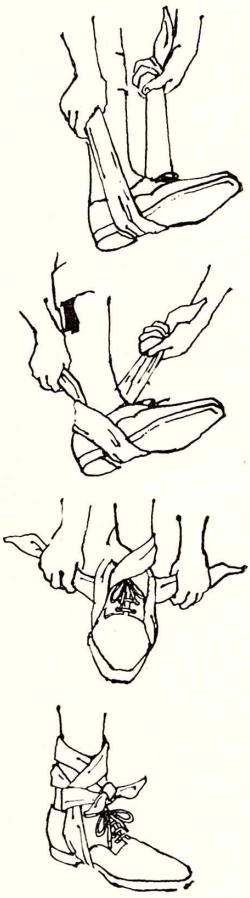
- Pain.
- Swelling.
- Joint feels hot.
- A bruise may come out later.

Treatment:

1. Put a bandage on immediately. The bandage should be tight and it should then be soaked in **cold** water.
2. Keep it wet—you can use methylated spirits to keep it cool if you have some.
3. If no relief, loosen the bandage and re-apply.

If you sprain an ankle while hiking, leave the boot on and apply a figure eight bandage over it. Keep the ankle wet. When you get to camp take the boot off and treat as above.

If the patient has sprained a wrist or an elbow you may have to use a sling to ease the pain.



BRUISES

A bruise is a wound in which the skin is not broken but the small blood vessels under the skin have been broken and blood, which cannot escape, spreads into the loose parts underneath.

Signs:

- Swelling.
- Soreness.
- Discolouration.

Treatment:

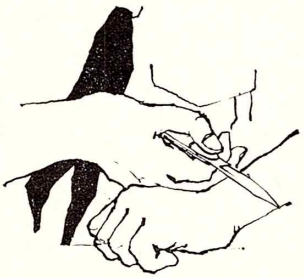
- Apply cloths wrung out in cold water.
- Re-wet the cloths frequently.
- Use methylated spirits to keep it cool if you have some.

BLEEDING FROM THE NOSE

Treatment:

- Tell the patient NOT to blow his nose.
- Loosen tight clothing around neck and chest.
- If indoors, seat patient in a cool current of air—near an open window.
- Tell the patient to breath through his mouth—head bent slightly forward.
- Squeeze with finger and thumb on soft part of nose below bone. Squeeze firmly to block the bleeding blood vessel. The patient may be able to do this himself.
- Continue to squeeze for 8-10 minutes.
- Clean up the blood around nose with cold water while squeezing.
- Relax your grip slowly and see that patient does not blow his nose.
- Do **NOT** plug the nose.
- IF BLEEDING LASTS A LONG TIME, CALL A DOCTOR.

STINGS AND BITES



Treatment:

- Do not try to get the sting out by squeezing it or you will squeeze more poison in. Pull it carefully with tweezers or you can sometimes scrape it out with the blade of your knife. Get your P.L. to show you how.
- If it is a wasp sting, dab the skin with vinegar or rub it with a raw onion.
- If it is a bee sting, dab the skin with weak ammonia or methylated spirits.
- If bite is made by an animal, get a doctor.

BURNS AND SCALDS

These things cause burns: Fire, hot metal, electricity, lightning, rope friction, acids, alkalis (caustic soda, strong ammonia, etc.).

These things cause scalds: Boiling water, steam, hot oil or tar.

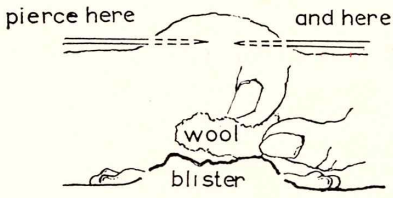
The effects of burns and scalds are similar. There is great danger of SHOCK and GERMS ENTERING THROUGH BROKEN SKIN.

Treatment:

- Treat for shock.
- DO NOT remove clothing unless wet with acid, alkali or petrol.
- DO NOT break blisters.
- DO NOT apply lotions or creams.
- Cover burn (and any burnt clothing) with clean (preferably sterile) dressings. DO THIS LIGHTLY.
- Pad with cotton wool and bandage LIGHTLY. Take CARE NOT TO BREAK ANY BLISTERS.
- Keep patient warm and comfortable. Rest the injured part.
- For acids or alkali burns, wash away with lots of cold running water. Then treat as above as far as possible. Use baking soda for acids and vinegar for alkali burns if you have them.

For smaller burns:

- Wash with a solution of warm water and baking soda.
- Apply a thick paste of baking soda or butesin picrate and apply a sterile dressing.



BLISTERS

Blisters are "burns" caused by friction or scalding and are caused by:

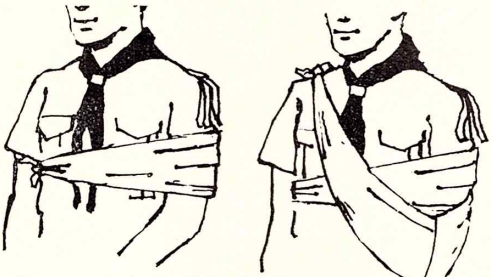
- Footwear too loose or too tight.
- Through excessive perspiration.
- Socks too thin.

Treatment:

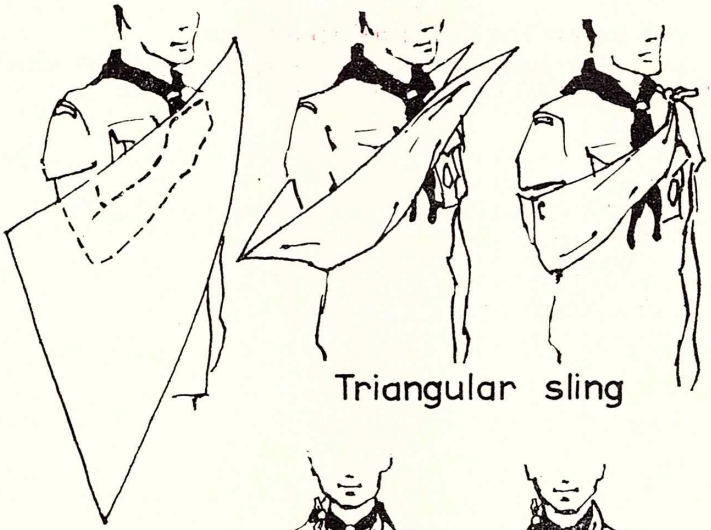
- If only red or sore—apply sticking plaster.
- Paint the blister with antiseptic and prick it with a sterile needle as shown.
- Press fluid out with clean dressing.
- Cover with a small dressing.

You should NEVER do this to blisters caused by burns.

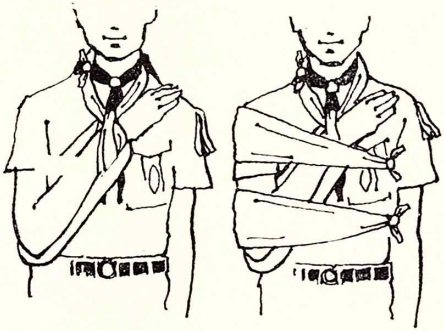
Always remember that you should cover the sore spots on your feet with sticking plaster as soon as they start to hurt BEFORE the blister occurs.



Fractured collar bone



Triangular sling



Fractured upper arm

TREATMENT FOR SHOCK

Every accident causes shock

The more serious the injury, the more serious the shock.

Signs:

A patient suffering from shock shows some or all of the following signs:

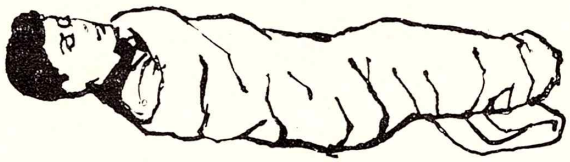
- Looks pale—in severe cases is unable to move.
- Feels cold and clammy—sweat appears on forehead.
- Pulse is weak.
- Breathing is feeble.
- Worried and restless—and sometimes sick.

DON'T WAIT FOR THE SIGNS TO APPEAR . . .

Take it for granted that in ANY injury the patient will suffer from shock—AND TREAT HIM FOR IT.

Treatment:

- Control the cause of the shock. For example, stop bleeding, or reduce pain from a fracture.
- Make patient comfortable, lying down with head low, at the same time steadying any injured part.
- Make sure he is breathing easily and has fresh air. Loosen any tight clothing near neck and chest.
- Keep people from crowding around.
- Keep patient warm with blankets but do not over heat—the idea is to prevent him from feeling cold.
- **If conscious** give sips of water or warm tea.
- Reassure the patient and NEVER discuss his condition or injuries in his hearing.
- Get an adult as soon as possible as he may have to go to hospital.



AVOIDING SUNBURN

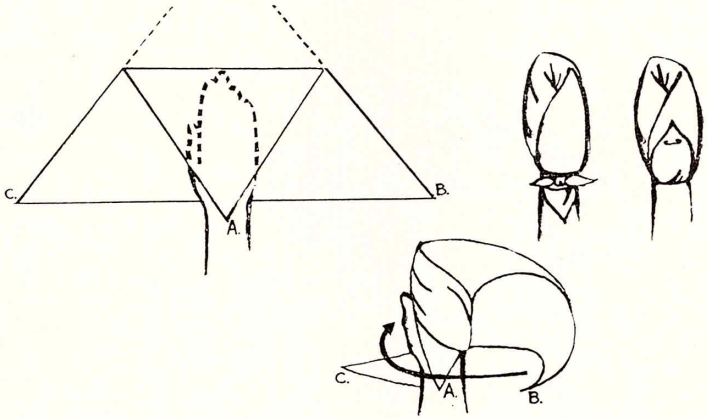
Sunburn can be very serious and dangerous, as well as painful. Bad sunburning may lead to permanent damage of the skin, which may never be properly cured.

Do not sunbathe for long periods until your skin is brown. Start off with five minutes' sunbathing and increase by about five minutes a day until your skin is used to it.

Suntan oils and lotions help to counter the effect of the sun's rays, but do not entirely prevent it. **Do not rely on these alone** until you have tried them out for short periods.

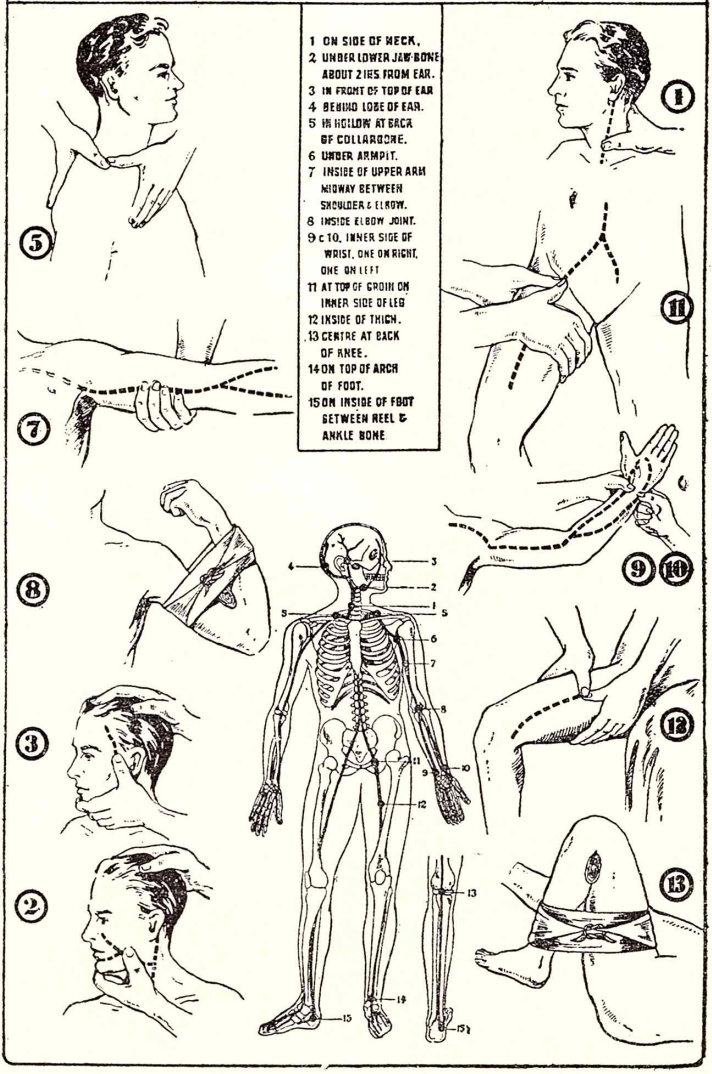
Treatment:

- For mild sunburn where there is no blistering, dab on Calamine Lotion or mixture of equal parts of calamine and methylated spirits.
- If the burn is severe treatment is the same as for ordinary burns.



Hand bandage

PRESSURE POINTS & THEIR LOCATION

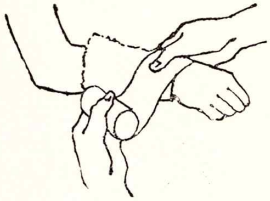

1 ON SIDE OF NECK.
2 UNDER LOWER JAW-BONE ABOUT 2 INS FROM EAR.
3 IN FRONT OF TOP OF EAR
4 BEHIND LOBE OF EAR.
5 IN HOLLOW AT BACK OF COLLARBONE.
6 UNDER ARMPIT.
7 INSIDE OF UPPER ARM MIDWAY BETWEEN SHOULDER & ELBOW.
8 INSIDE ELBOW JOINT.
9 & 10. INNER SIDE OF WRIST, ONE ON RIGHT, ONE ON LEFT
11 AT TOP OF GROIN ON INNER SIDE OF LEG
12 INSIDE OF THIGH.
13 CENTRE AT BACK OF KNEE.
14 ON TOP OF ARCH OF FOOT.
15 ON INSIDE OF FOOT BETWEEN HEEL & ANKLE BONE

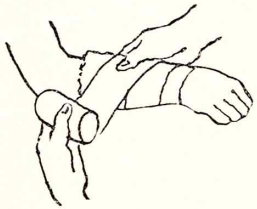
BLEEDING—ACT QUICKLY BUT DO NOT PANIC.

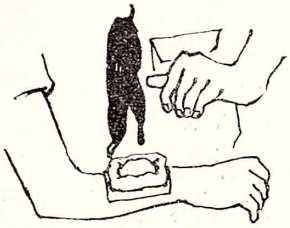
Blood from a cut artery is bright red and if it is near the skin blood will spurt out in time with the patient's heart beat. Blood from a cut vein is dark and flows in a brisk continuous stream.

Treatment:

- Lay the patient down and keep him warm.
- If NO FRACTURE, raise the part which is bleeding.
- Expose the wound but remove as little of the patient's clothing as possible.
- If blood is clotting, DON'T disturb it.
- Remove any dirt which is EASILY brushed off.
- If there is a FOREIGN BODY in the wound such as a piece of wood, or glass, or if a broken bone is protruding, make a pad which will fit around the wound without touching the foreign body and apply a tight bandage.
- If there is NO FOREIGN BODY in the wound, apply a dressing and cover it with a pad and bandage firmly.
- If blood soaks through the bandage, apply another over it.
- If bleeding continues, and if bleeding is from an artery, use pressure on the appropriate pressure point.
- Treat for shock.
- GET A DOCTOR AS SOON AS POSSIBLE.





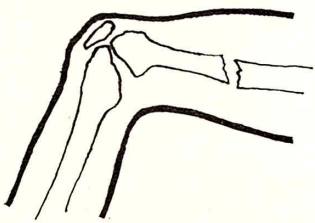


FRACTURES

Signs:

- Pain.
- Patient has a feeling of having no power in the limb.
- Very tender at that place.
- Swelling.
- Deformity.
- Shortening of limb as compared with the other one.

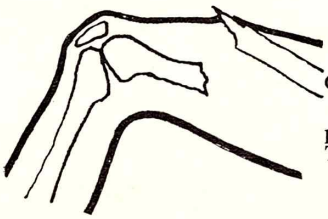
When in doubt, assume there is a fracture.



SIMPLE FRACTURE—no wound associated with it.

Treatment:

- Don't move the patient until the injured part has been immobilised.
- Treat shock.
- Don't remove clothing.
- Immobilise the injured part by splinting or bandaging. (See diagrams.) A fractured forearm is treated as for a fractured upper arm—the cuff bandage is omitted.
- Get patient to a doctor or hospital as soon as possible.



COMPOUND

In these cases the bone has been pushed out through the skin.

Treatment:

- As for simple fracture.
- Control bleeding.
- Apply dressing—use a ring pad.

DO NOT ATTEMPT TO PUT THE PROTRUDING BONE BACK.

CARRYING A PATIENT

If a person is seriously injured, it is best to leave him where he is until qualified help arrives if you can.

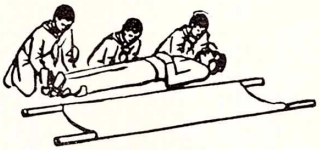
Of course, you may have to move him because of a fire or because of the danger of suffocation or other danger. If you must move him, don't let any part of his body that **might** be injured bend or twist or dangle or get bounced or pushed about; keep the part still.

Don't be in too much of a hurry to move a patient. Real haste is usually only needed where there is severe bleeding, or poisoning, or when artificial respiration is needed.

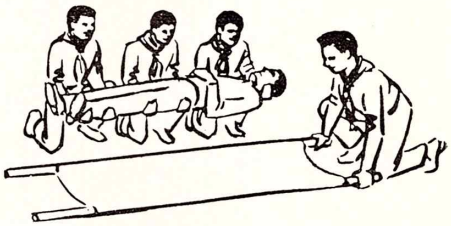
Here are some ways you can assist a patient and you and your patrol should practise all of them:

STRETCHER CARRY

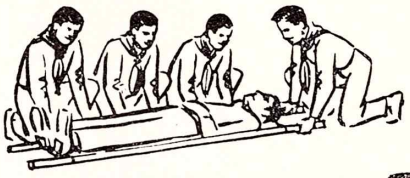
Each man kneels on knee nearest the victim's feet.



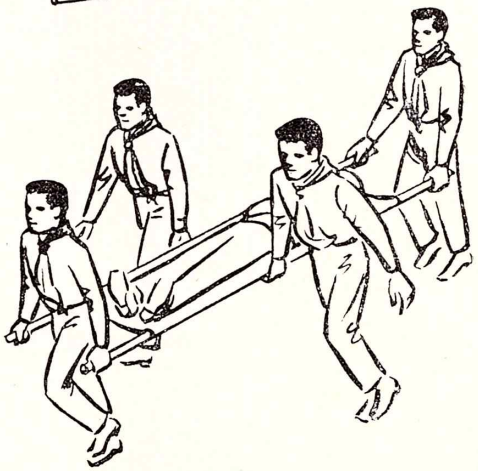
As fourth person says "ready lift", bearers lift the victim and rest him on their knees.



The fourth person slides stretcher close to bearers. "Lower" command is given, and victim is gently placed on the stretcher.



One bearer gives "lift" command. When starting out, front and side bearers step off with left foot; rear bearer with his right foot.



Pick-a-back carry.

Walking assist.

Two-man carry.

THINGS TO DO

1. Learn the Fireman's Lift.
2. Make and use a stretcher.

save his life

Respiration means breathing. If you stop breathing and your brain is not supplied with oxygen for only four minutes, irreparable damage is done to it. The idea of artificial respiration or resuscitation is to prevent this, so you have to be very quick about it. This is so important that you **must** know at least three methods of doing it. You will probably have been shown it at school, but you must be certain you are able to do them correctly and for fairly long periods of time. You should aim at practising them regularly and for at least five minutes.

If the mouth or face is not injured, use mouth to nose or mouth to mouth method.

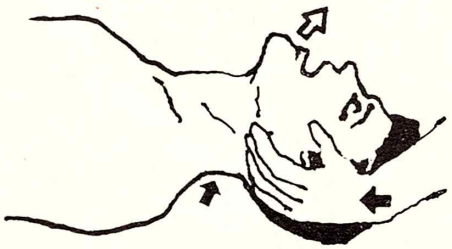
- Speed is vital, start as soon as possible.
- Don't wait to move the patient, start where he is—lying on the ground, or in shallow water, etc.
- Work from one side of him.
- Lie the casualty on his back. Hold his head in both hands, one hand pushing the head back and the other pushing the lower jaw upwards and forwards.

- For an infant or young child—seal your lips around his mouth and nose, **blow gently** until you see his chest rise. Stop and remove your mouth.
- Repeat this procedure at the rate of twenty times per minute.

- For an **adult**—seal your lips around the casualty's nose, keeping his mouth closed and taking care not to pinch his nostrils. Blow into his lungs and watch for his chest to rise, then remove your mouth. Repeat this at the rate of ten per minute. THE FIRST SIX INFLATIONS SHOULD BE GIVEN AS QUICKLY AS POSSIBLE.
- To improve the air passage. While continuing rescue breathing in the case of

  A young child: Place one hand under his neck and raise gently. With the other hand extend the head backwards.

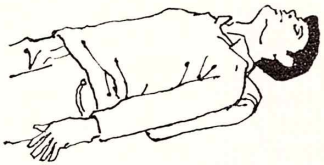
  An adult: Grasp the back of the head between the hands with fingers gripping the angles of the jaw. While extending the head backwards, push the jaw upwards and forwards.



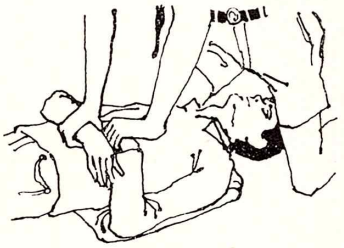
- Gurgling or noisy breathing may mean that the throat needs to be cleared. You do this by striking the patient a few sharp blows between the shoulders. Check to see if there is any debris and if there is remove it.

The Revised Silvester Method

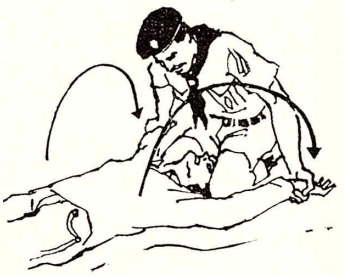
- Remove any obvious obstruction to breathing.
- Lay the patient on his back and put something under his shoulders to raise them. If possible the head should be lower than the rest of the body.



- Kneel at the casualty's head and grasp his arms and press them firmly over the lower chest. This movement should force air out of his lungs.



- Release this pressure and pull his arms with a sweeping movement upwards and outwards above his head and backwards as far as possible.
- Repeat these movements rhythmically about twelve times per minute, checking the mouth frequently for obstruction. Each cycle takes five seconds—two seconds for chest pressure and three for arm lift.



- If you have someone helping you he can press the patient's lower jaw so that the chin is jutting out. He should also ensure that the mouth is kept as clean as possible, turning the head if necessary.
- When natural breathing begins, you should time your movements to fit in with it.

emergencies

You will have to demonstrate these—this means that you must practise them until you know how to do them very well and then do them for your Scouter. It's a good Patrol activity for you. Remember, accidents and emergencies happen in the dark, so practise them blindfolded or, better still, in the dark.

As a start you should read the Camp Fire Yarns Nos. 23, 24, 25 in "Scouting for Boys".

The main thing in all emergencies is to keep calm, act with decision and promptness. Use your common sense and remember that your example will help prevent any panic.

FIRE

- Warn the occupants of any building you see on fire.
- Call the Fire Brigade. If the 111 system is in use, be sure you understand it.

  What you do:

  Dial 111 and ask the operator for the service required—Fire Brigade, Ambulance or the Police. Don't hang the receiver up before you give the nature of the emergency, the address, including the name of the town.

  YOU DON'T HAVE TO PUT ANY MONEY INTO A PUBLIC SLOT PHONE TO RING 111.

  If you have not got the 111 system, ring the Fire Brigade and give them the address, including the town if necessary.
- Until the fire engine arrives do everything possible to rouse the occupants of the building. You can locate the nearest hydrant, so you can show the Brigade where it is.
- When the Brigade arrives help to keep the people back.

Clothes on Fire

If a person's clothes are on fire, roll him on the ground and wrap him in a coat, carpet or blanket to smother the flames. Don't forget to treat for shock.

Petrol, Oil, Kerosene or Paint Fires

These fires should be smothered with sand or earth. Don't use water as this will only spread the flames.

LIFESAVING

Rescue from drowning involves three stages:

1. Rescue from the water.
2. Resuscitation.
3. Treatment of shock.

Rescue from the Water

If you see a person in difficulties in the water on a beach patrolled by the life savers, make sure they are told **at once.**

If the beach or river is not patrolled by life savers:

- Throw a line to the person in difficulties.

If you can't do this:

- Row a boat or go on a surf board or in a canoe.

If you can't do that and you are a competent swimmer:

- Swim out to him.

ELECTRIC SHOCK

If the patient is in contact with high tension current it is extremely dangerous to attempt to move him, and he will almost certainly be dead.

If he is in contact with the house supply act promptly.

- Switch off current by pulling the switch.
- If you cannot do this, don't touch the patient unless you are well insulated. Glass, rubber, and dry wood are good insulators, and you should stand on one of them if possible.
- Drag the patient away with a broom or a walking stick or dry board and commence artificial respiration immediately. Treat for shock. Send for the ambulance.

ICE BREAKING

There are not many parts of New Zealand where this emergency could arise.

If you see such an accident remember that the victim has already fallen through the ice so take care you don't fall through yourself. Try and find some way of throwing a rope or pushing a stick or a ladder out to the victim and drag him onto the firm ice.

Don't forget you may have to treat for shock or drowning. If the patient is alright keep him moving and help him run home to bring back some of his body heat. At home he should undress, rub down with a towel and get to bed. Hot drinks are useful.

Things to do

1. First Aid is so important you should take your First Aid Badge as soon as possible.
2. If they have lifesaving classes at school join them and try to get your bronze medallion.
3. Visit the fire brigade and ask them about fire extinguishers and what assistance you can give the Brigade.
4. Visit the local ambulance, the drivers can be of great help to you. Ask them about transporting a patient. You might help them clean the ambulance as a service job, it's a good way of getting to know what they carry.
    - Visit the Police Station and ask the Officer in Charge about the 111 system.
    - Borrow or make a manikin and practise mouth-to-mouth resuscitation. The local life-savers will help you.
    - Practise bandaging and emergencies.
    - Talk to the local Power Board about electrical shocks.

These are Patrol activities and you should get Skip's approval before you go. Each one of you should now make up a personal first aid kit.

swimming

In Camp Fire Yarn No. 9 of "Scouting for Boys", B.P. had this to say about swimming (or bathing as it was better known then):

"When in camp, bathing will be one of your joys and one of your duties, a joy because it is such fun, a duty because no Scout can consider himself a full-blown Scout until he is able to swim and save life in the water."

This book won't teach you how to swim; it's an art which comes from lots of practice, and you should take every opportunity you have at school to learn to swim and if possible to get your bronze medallion for lifesaving.

The first thing to achieve is confidence in the water. If you are a beginner, choose water which will come chest high and enter it quickly. Learn to duck your head under without covering the nose and eyes, then learn to open your eyes under water. Once you can do this, you will be surprised how quickly you will lose any fear of the water.

The next stage in learning to swim is to get the feeling of flotation by grasping the edge of the pool while you develop the kick needed for swimming. This is followed up by swimming along using a board in your hands and kicking with your feet. After this you begin to use your arms, and in a short time you will be swimming under your own steam. From then on it's just a matter of practice.

THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN BY ALL SWIMMERS—LEARNERS OR EXPERTS:

- Don't dive into unknown waters—it may be shallower than you think, or there may be snags, rocks or holes.
- Be careful when swimming in unknown waters—there may be dangerous currents, undertow, rocks, or holes. Whenever possible swim only on patrolled beaches, between the flags.
- Don't go swimming alone.
- Don't swim when tired or too soon after a meal—you may risk cramp, which is painful and very dangerous.
- If you get into difficulty, don't panic or over exert yourself. The human body will float naturally in an upright position with the nose clear of the water, but you will go under if you thrash around.

health

HEALTH

It isn't much good being able to give first aid and help people who are sick if you can't look after yourself. A Scout will keep himself fit all the time. B.-P. thought that health and fitness were so important that he included them in his aims of the Scout movement. Read Camp Fire Yarn No. 18.

It is your responsibility to see that you are healthy and fit. Your parents and your school teacher will have told you what you should do, but the doing of these rules is up to you and you can't shirk this job.

Here are some of the requirements for good health:

FRESH AIR AND SUNLIGHT

Fresh air supplies oxygen to the blood stream though the air which you breath into your lungs. Breathing through your nose helps the body to get oxygen from the air, and you know what happens if a person is deprived of air. That's right, you have to give him artificial respiration until his own body can resume this function.

As well as supplying oxygen, breathing gets rid of the carbon dioxide in your blood. This is the gas produced after the body has used up the oxygen supplied to it through your blood stream.

So you see how important the breathing of good fresh air is. You should always sleep with a window open. It is a good idea to take deep breaths from time to time to help keep your breathing apparatus in good shape.

Sunlight and fresh air outside, apart from being very pleasant, are essential for your good health. Sunlight is a very good germ killer and it will help your body to absorb vitamin D.

Remember what you have been told about sunbathing and don't do too much at one time—take it very gradually.

CLEANLINESS

Those parts of your body exposed to the air gather dirt—your face, hands, neck and ears especially. You should wash and dry yourself very thoroughly. A shower or a bath, followed by a good hard rub down with a towel, every day is what you need.

Don't forget that you must wash your hands before every meal and before you start cooking. It isn't tough to be dirty, and if you don't wash your hands before you eat or start cooking you may give yourself or the people who eat the food you cook some infection. Now you know how to avoid doing this, so wash always.

FINGERNAILS

Of course you'll get these dirty, but they don't have to remain so—scrub them well with a nail brush as you wash your hands and keep your nails neatly cut.

HAIR

Wash and dry your hair frequently—brush it well to help prevent dandruff and to keep it neat and tidy.

TEETH

Clean them after each meal and keep them in good order; especially clean them before you go to bed each night. Toothache is not pleasant and can be very painful and a great nuisance in camp. Remember, an apple is a good thing to clean your teeth, and don't eat too many sweets.

WARMTH

Your body is designed to function at a temperature of 98°F. and it will maintain itself at that temperature if it can. When you are hot your body will perspire, and this will cool it down. Perspiration comes through the skin, and this is why you should keep your body clean and the pores of your skin open. Clothing is needed to keep your body warm in cold weather by protecting it from excess cold, wind and rain and to prevent loss of heat from the skin.

It is often said that the way to keep warm or dry in camp is not to get cold or wet. Simple, isn't it? This means that you should wear the right clothes at all times. Wool is the best thing to wear against your skin. Not only does wool prevent the escape of heat but it will keep you warm even if you happen to get wet. You should remember that if you do get wet you must change into dry clothes as soon as you can, and because of this you have to carry a change of clothing when you go camping.

Clothing absorbs perspiration and it must be kept clean and aired.

Shoes are very important, especially for a Scout. They should be the right size and shape. Shoes with fancy pointed toes might be the fashion, but you can't walk long distances in them and they can cause your feet to be deformed. Tramping boots should be big enough for you to be able to wear two pairs of socks with them. A good Scout will always look after his feet—keep them clean, nails cut properly, and look at them from time to time when you are hiking. Not only will this freshen them up but it will enable you to see that they are not getting rubbed, because if they do blisters will form, which can be very painful.

SLEEPING GEAR

A Scout will always change his clothes before he goes to sleep. Usually you should have a pair of pyjamas, but at least you should use dry clean clothing to sleep in. You will have noticed that Scouts put their blankets or sleeping bag in the sun after they get up. This is to keep them dry and aired. If you are lucky enough to have a sleeping bag, you should turn it inside out before you air it.

EXERCISE

This is very important to keep our limbs supple, muscles firm and your body in good order. You should get a certain amount of exercise every day and don't rely just on the physical training you get at school or on organised games. Walking is a very good exercise and, above all, train yourself to have a good posture, whether walking or standing or sitting. When you stand try to stand tall and feel slim. When you sit sit upright with your feet on the ground—don't lounge in your chair.

Read "Scouting for Boys" Camp Fire Yarn No. 17. You will have to know the six exercises described there for your Second Class. Don't just know them—use them every day. That's the really important thing.

You may also like to do the exercises which the Royal Canadian Air Force developed to keep their jet pilots in first-class condition. These are called the 5BX plan and your Scouter will probably lend you a copy.

Whatever you do—exercise regularly.

REST AND SLEEP

These are very important for health. If you have a younger brother or sister, you may remember that when he or she was a baby they slept nearly all the time. This was to give their bodies a chance to grow. It's just as important for you to have the right amount of rest and sleep. This is why when you are camping you need a good bed to sleep in and why your camp programme will include a rest period each day. You should have about ten or 11 hours' sleep each night and only a real tenderfoot talks in the tent after lights out. A real Scout goes to sleep as soon as he can to be ready for all the activity and adventure of the morning.

HYGIENE

Hygiene is that branch of science which is concerned with keeping people in good health. It isn't much good knowing how to take care of the sick and injured if you can't look after yourself and do your bit to keep all the other Scouts in your camp fit and well.

At home, of course, Mother looks after all this—she sees that your food is properly stored, that it is cooked in clean saucepans, that your home is clean and tidy and that you have clean clothes and bedding. Now when you go to camp or on a hike you have to be prepared to do all this for yourself.

This is very important and when we talk about cooking and camping you will see how important it is.

Remember it isn't tough to rough it and live in dirty conditions in a camp, all you need is a little ingenuity and you will be able to live as hygienically in camp as you do at home.

food

FOOD

You don't have to be told how important this is, do you? But you must see that it is the right kind of food which will give you a balanced diet. Your body needs:

Protein
Fats
Carbohydrates
Mineral salts
Vitamins
Water

Proteins

Proteins are used to repair the tissues of your body and build new ones. You see how essential they are for you while you are growing up. The most important protein foods are meat, fish, eggs, cheese and milk.

Carbohydrates

Carbohydrate is quickly used by your body to provide energy, and you need plenty of that! The foods which contain most carbohydrates are those which are made of sugar and flour, such as cakes and puddings, chocolates, sweets and bread. If you eat too much carbohydrate your body will store it as fat and cannot use it to help to build muscle. So you want enough, but not too much.

Fats

Fat produces twice as much energy as an equal quantity of protein or carbohydrate and it is the form in which your body stores energy. Fat also acts as an insulator for the body. It is found in cream and butter, the fatty part of meat, and in some fruits and vegetables especially nuts.

Vitamins

These are chemical substances found in various foods and they are essential for growth and health. They are named after letters of the alphabet in the order in which they were discovered. Your

mother will tell you about them because she probably had to give you some when you were a baby.

Here are the names of the more important ones and what they do:

Vitamin A—

Increase resistance to diseases.
Necessary for normal growth.
Found in milk, butter, cheese.

Vitamin B—

Keep our nerves, skin and blood healthy.
Found in cereals, yeast, milk, egg yolk, liver.

Vitamin C—

Keeps our skin in good condition.
Prevents scurvy—you know all about this and what Captain Cook did to avoid it breaking out in his crew, don't you?
Found in fresh vegetables, oranges, lemons and tomatoes.

Vitamin D—

Needed to enable our bodies to make use of minerals, especially calcium and phosphorus, which help to build our teeth and bones.
It is formed on our skins by the action of sunlight.
Found in cod liver oil, fish, milk, butter.

There are lots more of these and perhaps you'll be told more about them in General Science at school.

Minerals

We've just been talking about calcium and phosphorus but we do need small amounts of other minerals such as copper, iodine, and salt. These are found in milk, liver, meat, fish, green vegetables, iodised salt.

WATER

In addition to all these things we need liquids. Two-thirds of our body weight consists of water and we must have sufficient wholesome, pure water to drink. It helps to dissolve our food before our body can use it and we need it to help our kidneys and bowels to get rid of waste products. Drinking water is very important and you should be very careful with the water you drink. In open country or in farming land you should boil all the water you use to drink. It can easily be polluted and harmful. Boil it for five minutes and if you want to drink it cold pour it backwards and forwards from your billy to another clean container. This will help cool the water and also to put some air back into it and make it much nicer to drink. Even in the bush it is a wise precaution to boil your water. Tea or coffee made with boiling water is probably the safest drink to have—if you want to drink water boil it first.

Remember all these things should be present in a proper diet and remember them when you make out your menus for hiking or camping.

hiking

Now you are ready for the hiking trail—ready to put the things you've learnt into practice and to learn some more. You've learnt a bit about first aid and hygiene that will stand you in good stead, but you've now got to learn fire-lighting and cooking, pioneering, finding your way with map and compass and signalling. You'll be getting ready to take the final trail—the camping trail. Of course, you will be doing some camping all the time, but you should be learning all you can so that you can put it into practice in the real test—the first class journey. There's no make-believe about that—it's the REAL thing: you and your companions will be on your own perhaps for the first time in your life. Learn as you go and you will pass this test easily and well. You'll be over with the preliminaries and off to Venturing and Queen Scout.

GEAR

You'll need a bit more gear and if you're a good Scout you will have been saving up to buy it. The things you'll need are:

Boots for Hiking

These should be ankle length leather and strongly made. If they have a plain leather sole, stud them with hob nails—Dad will help you—make a regular pattern of them and not too many. Rubber soles are good and quite suitable for hiking. Remember boots should be big enough so that you can wear two pairs of socks with them.

Get some Dubbin and rub it well into the boots—inside and out. This will protect them and will stop water soaking into the leather. Keep them clean and dubbin them from time to time.

Waterproof

You'll need a waterproof coat or parka. A parka is best and your mother may be able to make one for you and then you can waterproof it yourself. Oily dressing for this can be bought from any sports goods shop or the Scout Shop. If you buy a parka, get a larger one than you need. It will last you longer as you are a growing lad.

Pack

You don't need to buy a framed pack. It's a good idea to get a frameless one at the start. Unless a framed pack really fits you, it's of no advantage. You shouldn't be carrying heavy weights and, as you will still be growing, a good frameless pack from the Scout Shop is what you want. It's perfectly comfortable if it's packed correctly.

If you can, get one with side pockets. Back pockets are not much use. If they are big enough to use they put too much weight too far back. A waterproof extension sewn around the top is a good idea as you can then tie the top of the extension and make your pack almost waterproof. Remember that all gear is expensive and you must take good care of it. Put Dubbin on the leather straps of your pack and be sure to scrub it occasionally to keep it clean.

Got your gear? Here we go!

HIKING AND CAMPING ETIQUETTE

Unless every Scout observes these simple rules we won't be popular, and we can hardly blame a farmer closing his land to us. Show your gratitude to him by always observing the following rules:

Permission

Permission should always be obtained before crossing or camping on private property, and if possible you should get this permission well before you want to go.

Fences and Gates

1. Never damage fences or gates.
2. Use a gate rather than climb over a fence. Always leave a gate exactly as you find it. Carelessness with gates may keep stock from water or, on the other hand, may allow the farmer's stock to get mixed.
3. If you have to climb a fence, climb through rather than over it, and if climbing over is necessary, as in the case of a barbed wire fence, do so over a strainer post.
4. If a gate is locked climb over it at the hinged end.

Stock

1. Do not alarm stock. Move slowly if they get excited or edge away. Looking stock in the eye worries them.
2. Avoid crossing sheep country in the lambing season.
3. Remember the bull and beware of cows with young calves.

Fires

1. Watch for fire district notices.
2. Do not light large fires.
3. Never light fires against trees or on peaty ground—the fire may spread underground.
4. Light your fire on shingle or sand and make sure it is completely out before moving on.

Bridges

Foot bridges should not be overloaded or swung. Not more than one or two should cross at a time.

Crops

Walk on the verge and not through the field.

Tramping Club Huts

If you use these, get permission well in advance. Replace wood supplies you have used and leave the hut neat and tidy. Do not leave food about to encourage mice and rats.

Farmers' Dogs

Never feed a farmer's dog or play with it. Farmers don't like it because it spoils the dog for working.

Trees

A Scout should never cut or chop trees down. A tree which takes many years to grow can be destroyed in a few minutes and Scouts should not do it. Even manuka should not be cut unless permission has been obtained and if you are permitted to cut it don't leave sharp stakes to injure stock.

CARRYING FOOD

This is very important and there are several ways of doing it. Here's one way that's often used.

Meat

Put this in a polythene bag and put it in a billy. Remember you should also take a piece of butter muslin so that you can make a small safe to hang it up in a cool place when you get to your camp site. Here's how to do it. You could carry the butter muslin in the same billy as the meat.

Milk

Get a light polythene or plastic bottle with a screw top. Make sure it's clean before you use it. When you get to your camp site put it **in the stream in the shade.**

Sugar, Tea, Coffee, Salt, etc.

Get hold of some aluminium screw-top tins. Your chemist may be able to help you here—he might have some M and B tins. Keep them clean and see that you don't "cross thread" the tops because if you do they will be difficult to get off.

Butter

Use an M and B tin for this. Keep it clean. On a hot day store your butter with your milk in a stream in the shade.

Bread

Carry this in a clean cloth bag.

CARRYING COOKING AND MESS GEAR

Plates, Mug and Knife, Fork and Spoon

Put these in an old flour bag and tie the top. Even better, you can make a cloth bag especially for this.

Billy and Frying Pan

Get a similar bag for these—you can then put them in your pack and they won't dirty it. Be sure to wash the bag when you get back.

Tea-towel and Soap

Put this in a polythene bag. It will keep the rest of your pack dry on the way home.

CARRYING PERSONAL GEAR

Soap and Towel and Toothbrush

Remember what has been said about washing your hands. Take a piece of soap and a towel in a polythene bag and put your toothbrush in either wrapped up or in its holder.

Toilet Paper

Remember to carry a small roll—there is really no satisfactory substitute for it.

Spare Clothes

Get another flour bag or make a bag of a similar size and keep your spare clothes in it. On a day hike this might only be a spare jersey but use the bag to carry it in.

Sandshoes

A similar bag for these is good and will keep them neat and tidy in your pack.

Waterproof

Put your waterproof coat or parka on the top of your pack so that you can get it easily.

EMERGENCY KIT

It's good practice to carry one. Here's what you should do:
Get a polythene bag and put into it:

Matches. In a screw capped jar or aluminium tin. Don't forget to put a piece of the striker in.

Stub of a Candle. To help you light a fire in the wet.

Bootlace. A spare just in case.

Torch.

Spare Globe. On a longer trip take spare batteries.

Rough Notebook and Pencil. This is for taking notes or leaving them. Use it for making notes about trees and birds.

FIRST AID KIT

The one you've already made up for yourself.

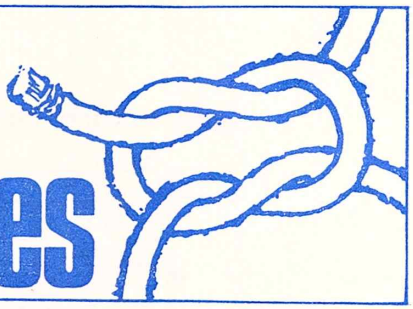
TIDINESS

One of the things you must learn to do, whether you are on a day-hike or at a troop camp, is to keep your surroundings clean and tidy. Don't throw your rubbish all over the place—people who do this just aren't Scouts. They are litter louts and we must set them a good example. The rule is that you should bash, burn and bury all your rubbish and clean up the site before you leave. In some permanent camp sites you will be asked not to bury this—just to bash and burn them and put them in the containers supplied to be taken to the rubbish tip. If you didn't do this, by the time your son wants to camp there, the ground would be so full of old tins he wouldn't be able to drive a tent peg in.

Remember, also, even on a day-hike to make a simple latrine and cover the paper and excreta after you have used it—and always wash your hands.

B.P. used to say that a Scout using a farmer's ground left nothing and his thanks. So, remember, clean up well **and** thank the farmer. If you do this he will be glad to have you back again.

knots & hitches



You probably already know how to tie some knots. For Scouting you will need to know several more. When you go camping you use knots in setting up your tent and in making camp gadgets. You will use knots in pioneering and for a host of other activities.

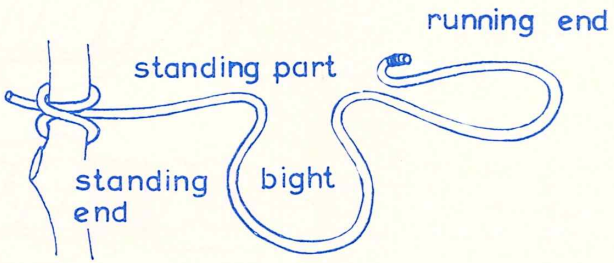
These knots are intended for use in laid rope of natural fibre, they are not so satisfactory when made in string, plaited or braided rope, or synthetic ropes such as nylon, for which special knots exist.

It is necessary to learn the proper uses of the knots and how to make them under any conditions. You should practise making them often so that you will not fumble or hesitate if you have to make a rope fast in a hurry.

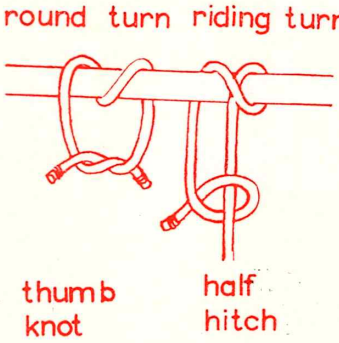
TERMS USED IN KNOTTING

The end of a rope in use is called the running end; the other end—the end not in use, the end made fast to something—is called the standing end. In between is the standing part. If you double a rope and hold the middle or make a flat loop, this is called a bight.

If a rope passes completely round a spar and back again, we have a round turn or, if the rope crosses over its own standing part, a riding turn. The construction of a thumb knot (also known as an overhand knot) and of a half-hitch is shown in the diagram below; one can be converted into the other by pulling on the appropriate ends: this is known as upsetting the knot.



Strictly speaking, a bend joins two ropes, a hitch makes fast a rope to something else, and a knot is the interweaving of one rope only. But there are exceptions; thus a reef knot is strictly a bend, not a knot.



WHIPPING

Before you start using a knotting rope you must see that it is whipped at the ends. The ends of a freshly cut rope will rapidly fray and unlay if nothing is done to prevent it. Temporarily you can use a thumb knot but for a permanent job you should whip the ends.

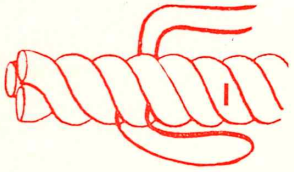
There are several types of whipping but the most usual and one of the best is called sailmakers' whipping.

SAILMAKERS' WHIPPING

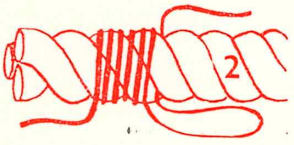
For ordinary-sized rope it is best to use three-ply hemp or flex seaming twine. It should be waxed by pulling the twine several times over a lump of beeswax or soap.

The length of any whipping should be approximately equal to the diameter of the rope on which it is made. All turns should be pulled tight; the seaming twine will not break.

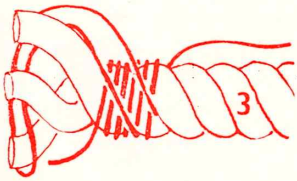
1. Insert the twine in the rope as shown (or unlay the rope, put a loop of twine round one strand with the ends between the other two strands and relay the rope).



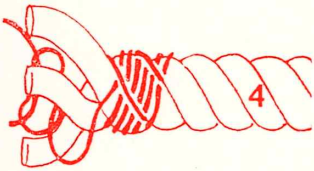
2. Hold the loop and the short end down out of the way and make the necessary number of turns with the other end of the twine.



3. Keeping the strain on the twine, slip the loop back up and over the strand it surrounds, and pull it as tight as possible, by pulling on the short unused end. Make sure it is pulled right on to the whipping.



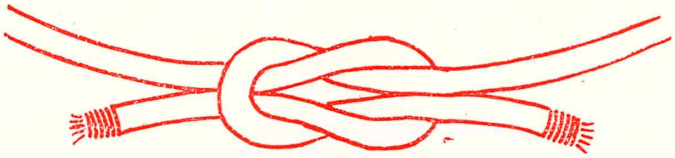
4. Bring the short end up along the lay of the rope and tie both ends together in the middle of the rope with a reef knot.



5. All whippings should be completed by trimming off the ends of the twine and then cutting off the surplus length of the strands about a quarter of an inch above the whipping.

THE REEF KNOT

The reef knot is used to tie the ends of a light line tightly around an object. Hence it is used in tying up a parcel, or in bandaging, or to brail a tent and so on. It should **NOT** be used to join, in mid-air, two ropes that are going to take any strain, as it jams too easily. It gets its name from the reef points of a sail; the lines used to tie up the bundle of sail to the boom when shortening sail.
Note that the running ends must be on the SAME side of the knot, parallel to their own standing parts.



THE SHEET-BEND

The sheet-bend is used to bend two ropes together, or to bend a rope to a loop. It gets its name from the rope attached to the corner of a sail. The rope is called the sheet.

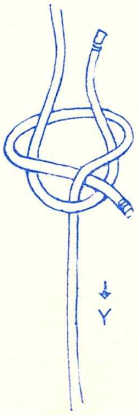
(Note: Better than reef for joining ropes of different thickness.)

Form a bight in the end of one rope. (Use the thicker one if the ropes are different thickness.)

Pass the running end of the other (thinner) rope as shown.

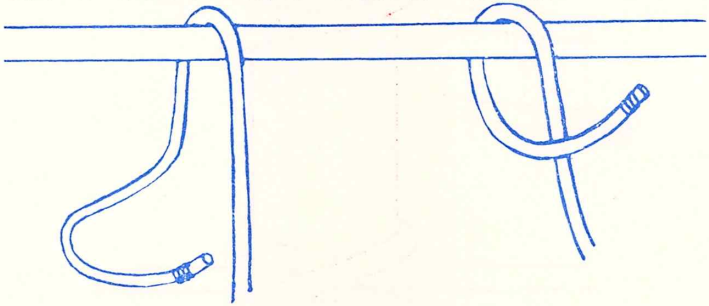
Note that the two ends should finish on the same side of the knot and that the running end of the second rope should finish at right angles to its own standing part.

Pull tight by holding both parts of the bight (X) but only the standing part of the other rope (Y).



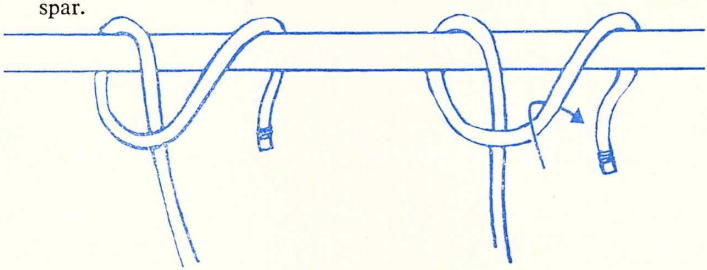
CLOVE HITCH

A clove hitch makes fast a rope to a spar. Take care in making this hitch, as it is very easy to make it incorrectly. Note that both ends need to be made fast, or the hitch can work loose.



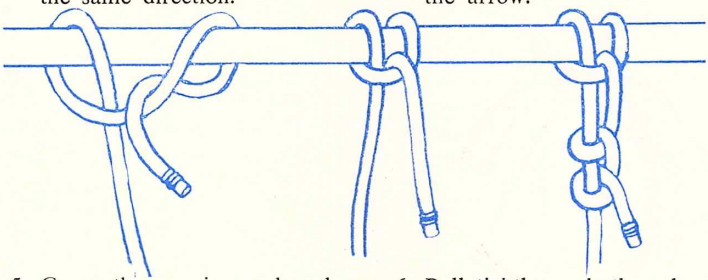
1. Pass running end around spar.

2. Hold crossed rope together.



3. Keep hold here. Pass running end over spar again in the same direction.

4. Keep hold. Put your other hand through as shown by the arrow.

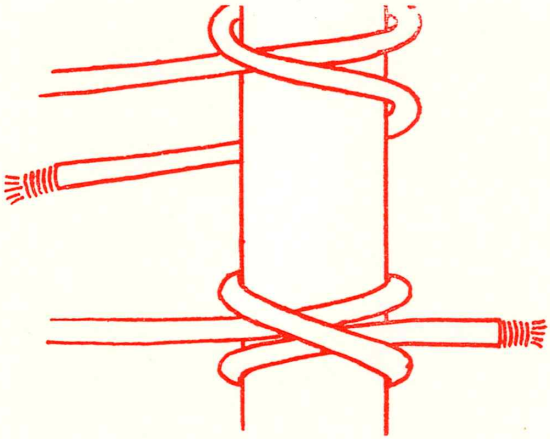


5. Grasp the running end and pull it through towards you.

6. Pull tightly on both ends.

7. A half-hitch or two made with the running end will prevent the hitch from working loose.

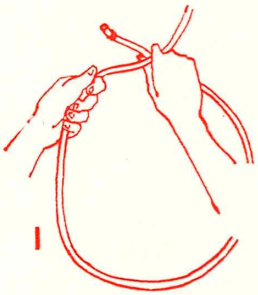
Here's another way to tie a clove hitch:



BOWLINE

The bowline forms a loop which will not slip in the running end of a rope.

It can be made with the loop towards you (e.g. around yourself) as illustrated. If you are left handed you will have to reverse the instructions.



First place the running end over the standing part and hold with the right hand (Fig. 1). Turn the right hand over. Lift the part in the left hand (labelled 'A' in Fig. 1) and place on 'B'. Now with the left hand, hold the two parts of the rope shown as AB in Fig. 2.

With the right hand take the running end on the course shown by the arrows. DO NOT LET GO WITH THE LEFT HAND.

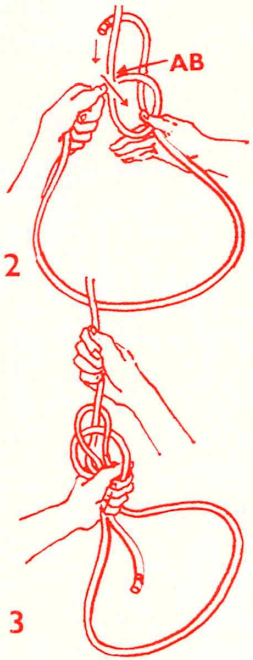
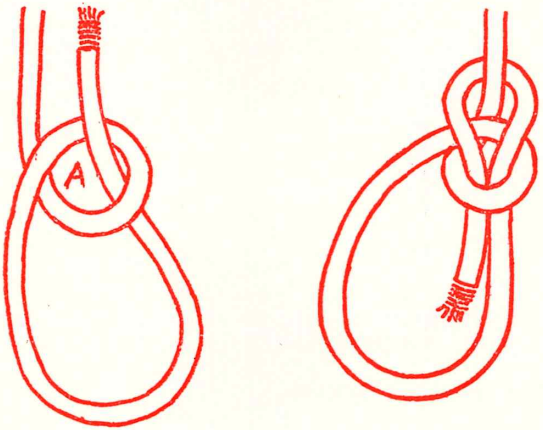


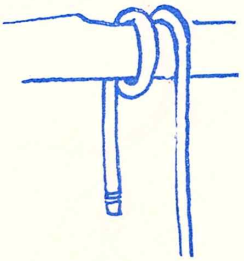
Fig. 3 shows how the knot is pulled tight. Gather the three ropes of the main loop in the last three fingers of the left hand while releasing the thumb and forefinger at AB and then pull the standing end with the right hand.

Here is another way to tie a bowline:

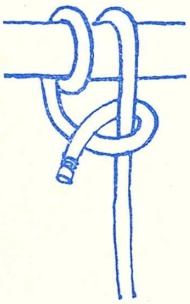


ROUND TURN AND TWO HALF-HITCHES

The round turn and two half-hitches is used to make fast a rope to an anchorage. It can be tied while the standing part is under strain.

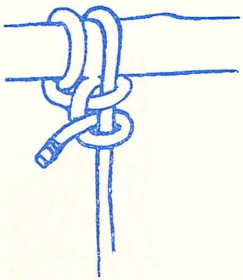


The round turn.



The first half-hitch. Pull it up on to the round turn.

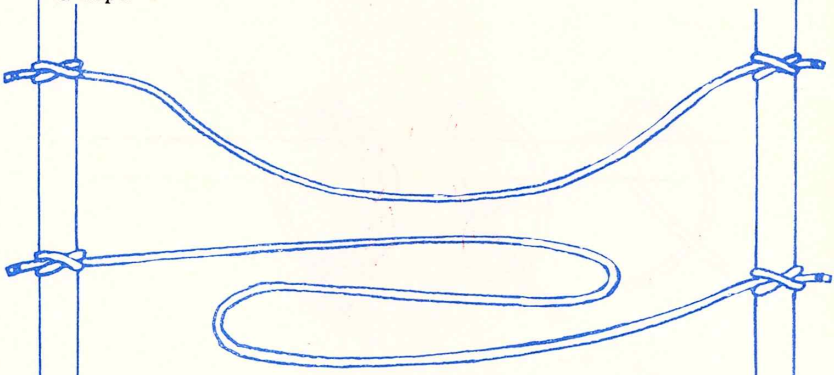
The second half-hitch is made in the same direction as the first.



The two half-hitches must be made hard down on the round turn, not along the standing part.

THE SHEEP SHANK

The sheep shank is used for shortening, tightening or strengthening a rope.



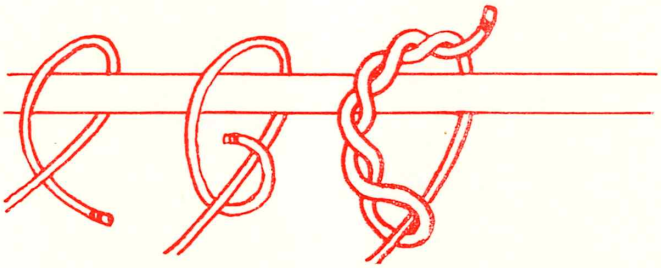
Form an "S" bend with the slack rope

— make half-hitches

and cast them over the "S" loops

THE TIMBER HITCH

The timber hitch is used to make fast a rope to a spar or a bundle of spars when the pull is along the spar; it is also used to commence a diagonal lashing.

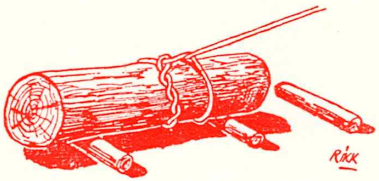


To make it, pass the running end around the spar.

then around the standing part,

then twist on itself at least three turns.

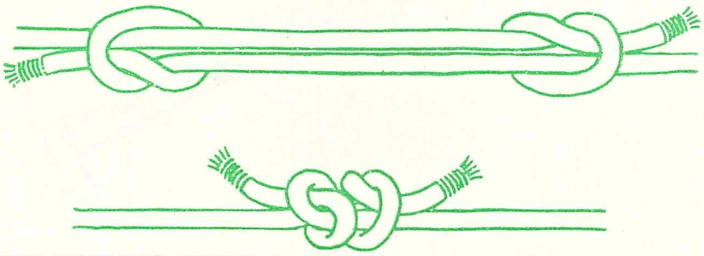
For hauling timber, especially for hauling a number of spars at once, it is preferable to use a killick hitch, which is only a timber hitch with a half-hitch further along the spar.



FISHERMAN'S KNOT

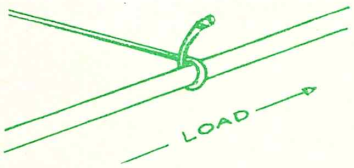
A fisherman's knot is used for joining fishing line, catgut or any greasy or slippery rope.

It is made up of two thumb knots like this:

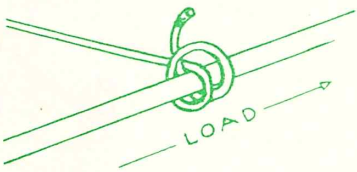


THE ROLLING HITCH

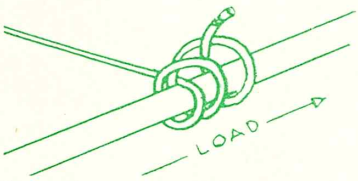
The rolling hitch is used to make fast a rope to another rope that is under tension; for example, to relieve the strain on a laden rope while adjustments are made in it.



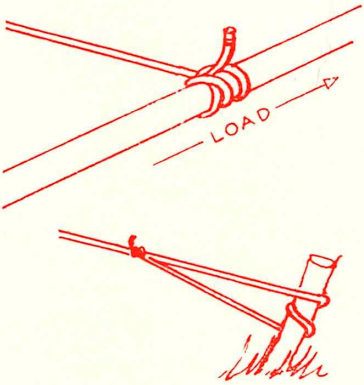
To make it, put on a riding turn in the direction away from the load.



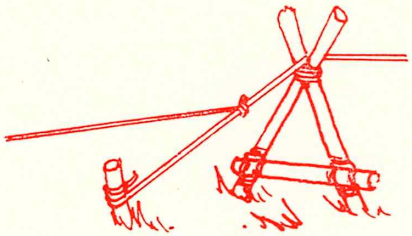
Then a half-hitch towards the load.



When there is no strain on it the knot can be slid into a suitable position with ease, but it will still hold when wanted.



Because of this property, the rolling hitch can be used to make fast a rope to an anchorage where the load is not great and the knot needs frequent adjustment, as in tent guys, etc. If the guy is not at right angles to the picket, put a round turn round the picket.



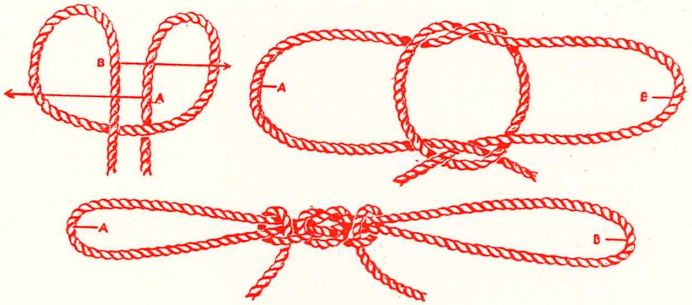
FIREMAN'S CHAIR KNOT

The fireman's chair knot is used to make two loops that will not slip in the bight of a rope.

When used as a chair knot, the smaller loop is placed around the body under the armpits and the larger loop under the knees. The loops are the right size when they extend from hand to hand of the outstretched arms with the knot at one shoulder.

The knot should be located that one free end of the rope can be used for lowering from above and the other for guiding from below.

To make it, cast up two half-hitches as for a clove hitch and pull the inner side of each through the other as shown. Adjust the loops to length, and secure by casting half-hitches over each loop.



THE MANHARNESS KNOT

The manharness knot is used to make a loop that will not slip when the rope is pulled in either direction.

When used to harness a man in a drag rope, the loop should be about three feet long and only one shoulder is put through it, not the whole body. If the load were to get out of control, it is easy to release one's hold on the rope using this knot.

The knot can also be used to make a rope tackle or to shorten a tent guy. The rope will run more freely and with less chaffing if a metal thimble or eye is placed in the loop.

Form a loop of the size required and hold the cross over in the left hand (1). Take the end of the loop in the right hand and pass it over the standing part (2), and up through itself (3), maintaining the hold with the left hand until the knot is drawn up tight (4).

lashings

Lashings are used by Scouts to make camp gadgets and pioneering projects.

If you are going to have the fun that only pioneering can bring you, you must learn to make lashings correctly right at the start. A poor or loose lashing could well endanger the safety of others and you have to see that they are made as safely as possible.

The first thing is that you must never make them in a hurry, and then make them exactly right.

Remember when you learnt how to make a clove hitch, one of its uses was to start a lashing. A timber hitch, you will remember, is also used to start a diagonal lashing, so practise these knots again before you start.

Good lashings are tied as tight as possible and you must follow the directions exactly.

What size rope do you need for lashings?

The circumference of the lashing rope should be about one-quarter of the diameter of the thicker spar:

For staves and spars up to 1¼ in. diameter, use codline.
For spars up to 3 in. use ⅜ in. lashing.
For spars over 3 in. use ¼ in. lashing.

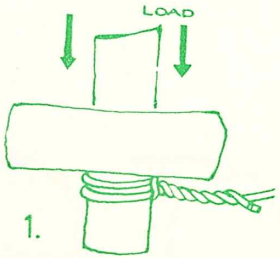
Length of lashing. One yard of lashing for each inch of the diameters of the two spars added together:

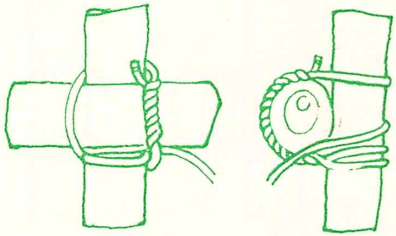
For staves and spars up to 1¼ in. diameter, say 9 ft.
For spars up to 3 inch, say 18 ft.
For spars over 3 inch, use the rule.

Square Lashing

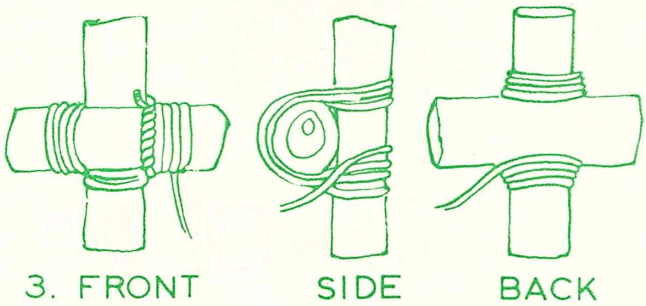
A square lashing is used when the load might cause one spar to slide along the other. Look at the diagram of the trestle on page 88.

1. Make a clove hitch on the side opposite to the load; twist the running end of the rope around the standing part—this twisted part must be long enough to reach the other spar.

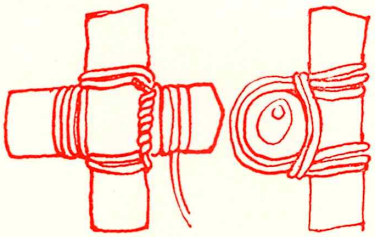




2. The lashing will finish on the second spar; up spar if it is on a slope. Make the first turn on the side on which the lashing will finish.

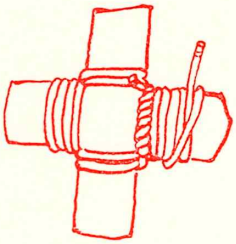


3. Make the second turn go on the inside of the clove hitch outside the rope on the next spar, inside on the next and so on. Do the same for four complete turns. Pull as tightly as possible. Keep all the turns close together, knocking them in with a stick. Avoid riding turns.



4. FRONT SIDE

4. To pull the turns tightly together, make two **frapping** turns. Take an **extra** quarter of a turn to get a straight pull before beginning the frapping turns—pull very hard on these.

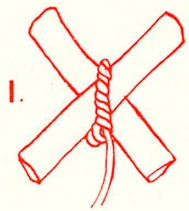


5. FRONT

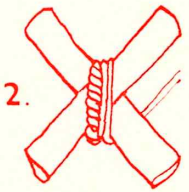
5. Finish the job with a clove hitch—working each back to the frapping turns until there is no movement in the lashing.

Diagonal Lashing

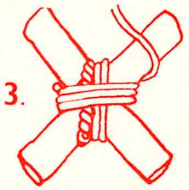
A diagonal lashing is used where the spars might spring apart.



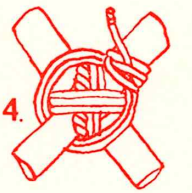
1. Start with a **timber hitch** around the vertical crutch.



2. Make three turns, counting the timber hitch as one.



3. Take three more turns around the horizontal crutch.



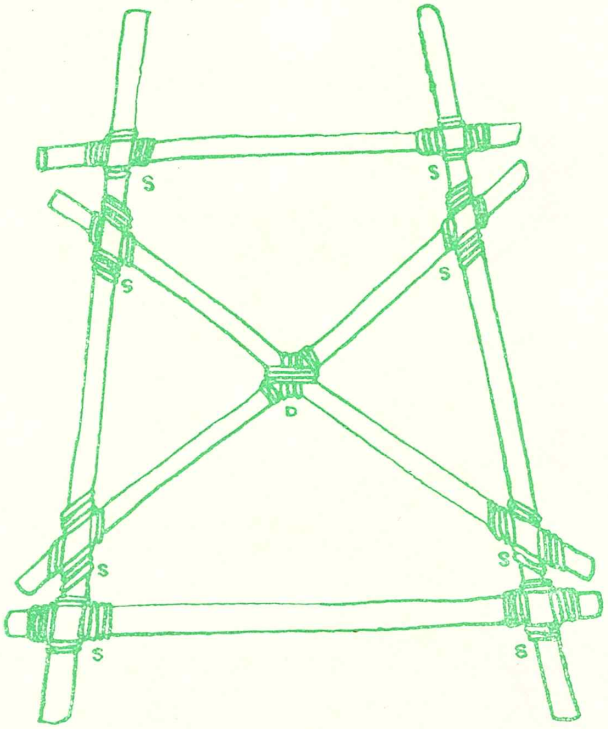
4. Tighten the lashing with two frapping turns and complete with two half-hitches up-spar. Be careful in changing direction that the pull is direct in each case, that is, that there are no riding turns; and make sure the final clove hitch is tight down on the frapping turns as with the square lashings.

Remember: Wrap thrice—frap twice.

Now make a Trestle using Scout Staves. To make the trestle, you need to join pairs of spars with lashings, using both square and diagonal lashings.

Look at the drawing carefully and you will see what sort to use where.

Remember also that bigger trestles are used in pioneering and think of what pioneering projects you could use a trestle or trestles in.

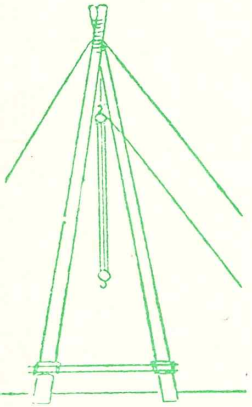


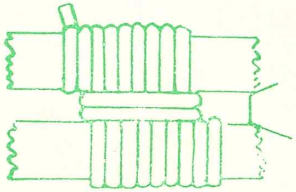
Sheer Lashings

When a load is supported on two crossed spars, the weight coming down on the "V" between them, a sheer lashing is used to tie the spars together.

Sheer legs, as they are called, can be used to pitch a Patrol tent, as a device for lifting weights or for making the four-legged camp table shown in the diagram.

To make the lashing, lay the spars together with the butts flush, that is, level. At the tip, above and below the place where you are going to make the lashing, insert two wooden wedges, slightly thicker than the rope you are using. Start with a clove hitch round one spar, with the running end and standing part twisted together for a few inches, then take six to eight turns around both spars above the clove hitch, pulling each turn tight. Make two frapping turns between the spars and finish with a clove hitch on the opposite spar to which you started. The wedges are removed just before starting the frapping turns. Don't make the lashing too tight.





Round Lashing

A round lashing is used to lash two spars together end to end to lengthen them (for example, to add a topmast to a flagpole) or if they are lashed together side by side. If a rigid joint is wanted, two round lashings a short distance apart are needed. Overlap the spars by at least one quarter of their length.

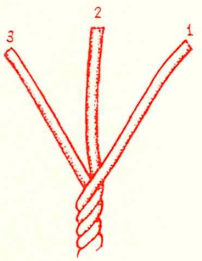
Commence with a clove hitch round the both spars twisting the running end and the standing part for a few inches. Take as many turns around the spars as possible upwards and finish off with a clove hitch round both spars. Tighten with wooden wedges driven from the top between the rope and spars.

SPLICING

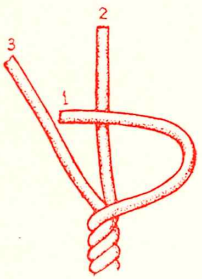
Back Splice

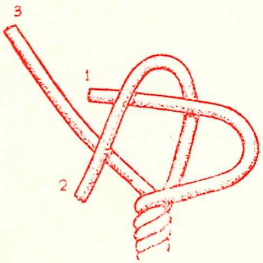
The back splice is a way of finishing off a rope that is not required to pass through a block. A whipping is probably more satisfactory for most purposes but it is a useful thing to know how to do.

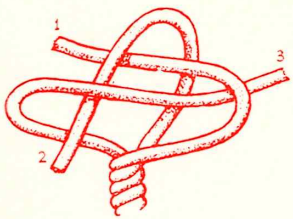
1. Unlay the end of the rope about three or four inches.



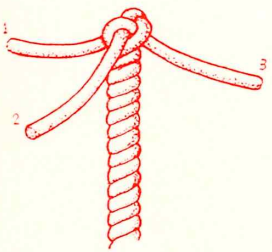
2. Make the crown knot:
   a. Lay 1 over 2.
   b. Bring 2 down over 1 and 3.
   c. Push end of 3 through loop made by 1.







3. Tighten each strand in turn by pulling downwards.

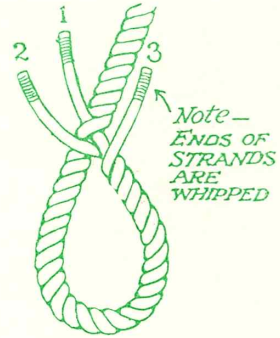


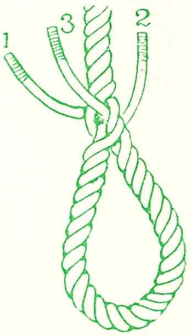
4. Make the first "tuck". Note that this is always done across the lay.

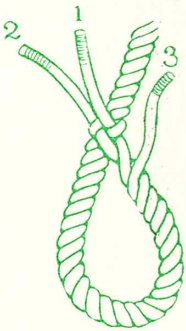
5. Do this for each strand.

6. Continue the tucks in turn.

Note. This method of making the Crown knot can be used on 4-strand rope.







Eye Splice

The eye splice is used for making a fixed loop in the end of a rope, e.g. to take the toggle of a flag.

1. Unlay about 3 or 4 inches.

2. Whip the end of each strand.

3. Tuck the centre strand through the uppermost strand of the rope at the size of the eye required.

4. Take the left-hand strand and tuck it to the left under the next strand.

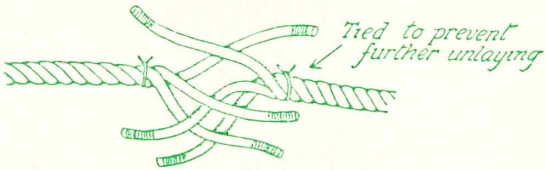
5. Turn the splice over and tuck the third strand under the remaining strand from left to right. Then, starting with strand No. 3, pull each strand tightly and evenly.

6. Now tuck all three strands in a second and third time.

The Short Splice

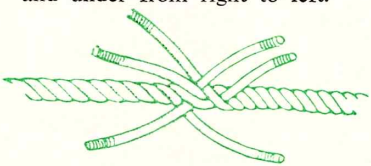
The short splice is used to join two ropes which do not have to pass through a block because the finished splice will slightly increase the size of the rope.

1. Unlay the ropes 3 or 4 inches and put a temporary whipping on each rope.

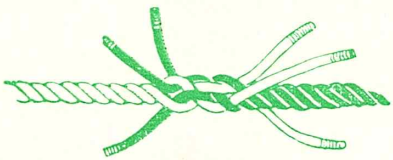


2. "Marry" the ropes together.

3. Hold down the ends on one side of side of the splice against the rope, while tucking the other ends, as in an eye splice, over and under from right to left.



4. Having tucked in one side, tuck the remaining ends of the other side. Then tuck all strands a second and third time.



pioneering tools

HAND AXES

A hand axe or a half axe is a vital part of a backwoodsman's equipment and it is important that you should know how to use them safely and effectively.

A hand axe (tomahawk or hatchet), with about a 1½ lb head, with a handle 16 to 18 inches long.

A felling axe, with a 2 to 2½ lb head, with a three-quarter length shaft, is about right for Scouts. Venturers may be able to use a felling axe with a 3½ lb head and a full length shaft.

Care of an Axe

- Keep the edge or "bit" sharp—sharp enough to bite!
- Keep the handle tight—if it gets loose, drive the wedge in further. Some axes have a bonded head which is very much less likely to come loose.
- Don't let your axe touch the ground—driving it into the ground may nick it, leaving it on the ground will rust it.
- Always have a chopping block under the wood you are chopping or splitting.
- When you have finished using your axe for a while, mask it in the chopping block. When you have finished with it for the time being, put it in its sheath.
- Rub the head of your axe with oil to stop it rusting and rub a little raw linseed oil on the handle from time to time.
- Never touch a living tree with an axe unless you have permission to do so and you have a definite use for its wood.

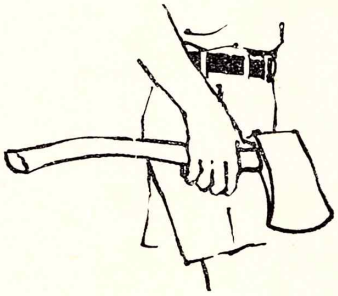
Safety Rules

Remember always that an axe improperly used is a very dangerous tool.

- See that the axe head is tight.
- See that the edge of the axe is sharp.
- Sheath the axe when not in use.
- Keep onlookers at a safe distance—at least two axe lengths clear.
- Clear overhanging branches of nearby trees or bushes.
- Secure a firm footing—always wear boots or shoes.
- Remove your scarf and loose clothing.
- Stop and rest when tired.

Carrying an Axe

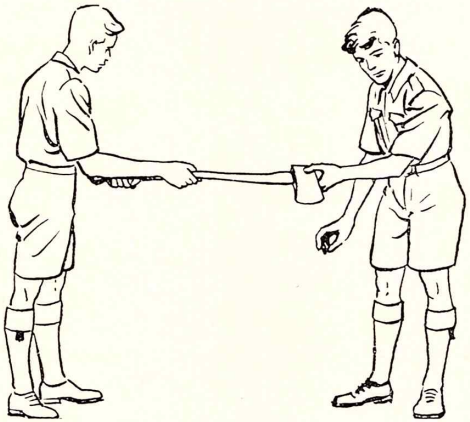
Carry an axe like this:



If you trip while you are carrying an axe in this way you will be less likely to hurt yourself.

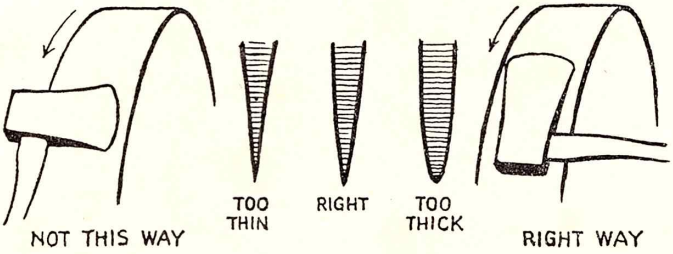
Passing an Axe

Do it like this:

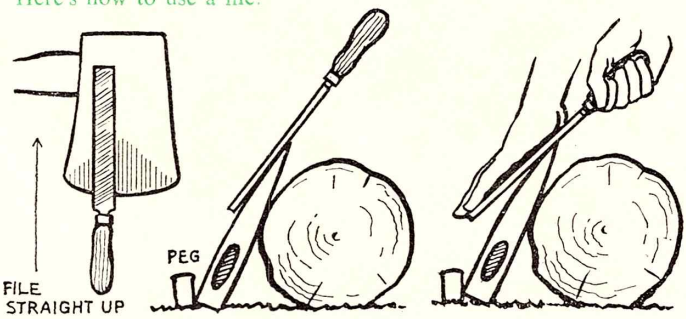


Sharpening an Axe

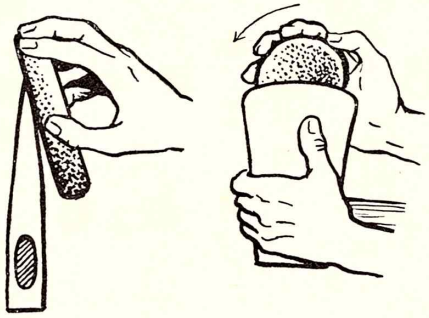
Here's how to use a grindstone:



Here's how to use a file:



Here's how to use an axe stone for the final keen edge:

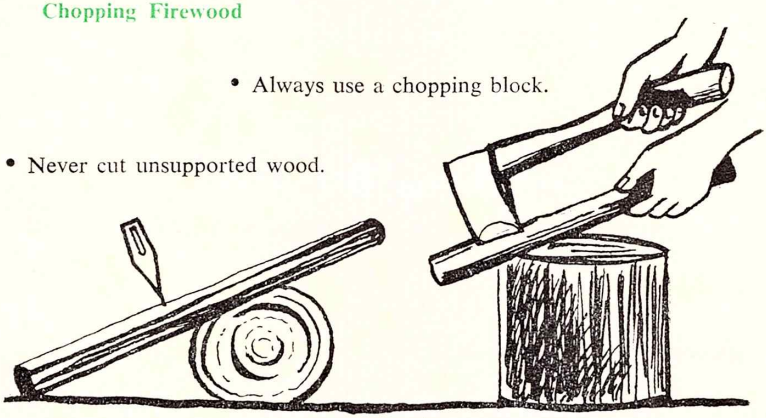


USING A HAND AXE

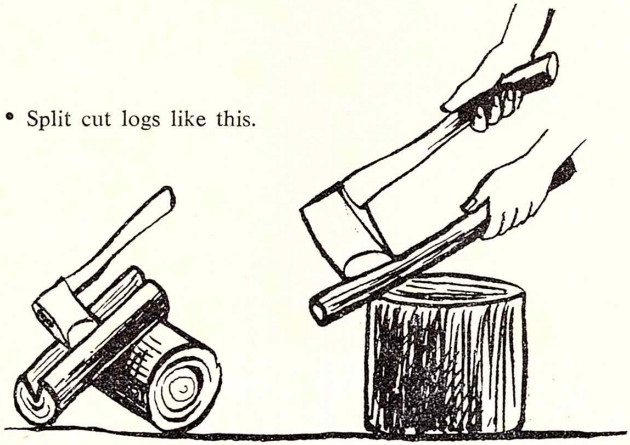
Chopping Firewood

- Always use a chopping block.

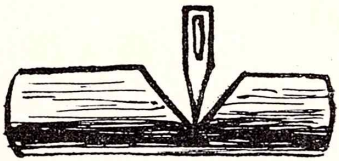
- Never cut unsupported wood.

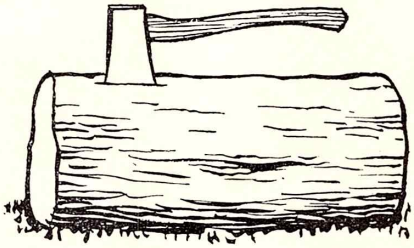


- Split cut logs like this.



- For thick pieces cut a "V" notch. The top of the "V" should be as wide as the branch is thick.





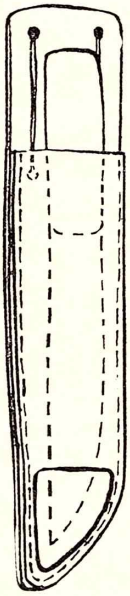
ALWAYS MASK YOUR AXE WHEN NOT IN USE

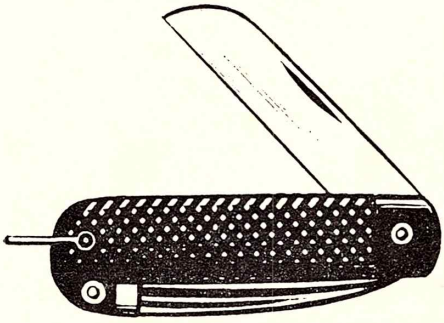
KNIFE

The most useful knife for Scouting is the claspknife with a marline spike.

If you have a sheath knife, it's a good idea to keep it in your pack.

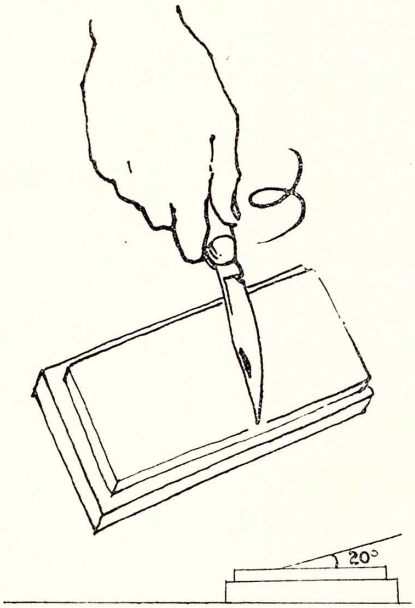
At least ALWAYS remove it from your belt BEFORE playing a game.





If you buy a sheath knife, buy a plain simple knife with a thin blade about 6 inches long—the Green River pattern is a good one. Make sure it has a good sheath and either sew the bottom of the sheath with fine steel wire or put an aluminium guard at the bottom of the sheath as shown.

Keep your knife sharp. Use an oilstone frequently. Remember to keep the blade at an angle of 20° to the stone.



NEVER THROW A KNIFE.

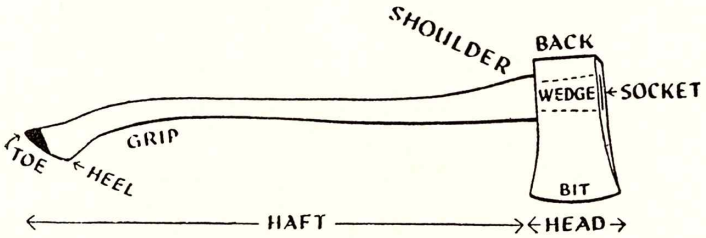
It is dangerous to bystanders and yourself and will damage your knife.

When using your knife always cut away from you. When whittling sit down and keep your elbows on your knees.

Keep your knife oiled and clean—don't forget to put a drop of oil on the knife joints.

USING A FELLING AXE

- Remember all the safety rules.
- Use a felling axe of the right size—it must not be too heavy.
- Grip the axe firmly throughout the whole operation of using it.
- Plant your feet firmly on the ground. Movement should come from your arms and your trunk above the waist.
- Keep the axe under control throughout each stroke. The swing is very important. Try to get a good rhythm.
- Practice on a fallen tree. It's easier to control your axe than on a standing tree.
- Learn to aim your blows where you want them.
- Keep your head still and look at the spot you want to hit!
- Learn to use the axe with a right and left hand grip.
- Let the axe do the work—don't force it.
- At the top of each swing the guiding (upper) hand should touch the axe head.
- At the moment of impact with the log the two hands should be together.

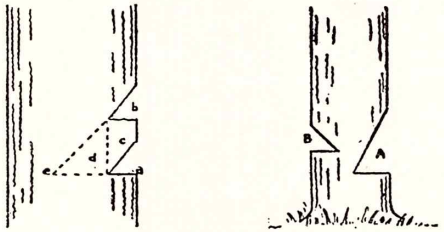


FELLING A TREE

Trees take many years to grow to maturity, and it is possible, in a few minutes, to destroy what has taken Nature years to create. Conservation of our natural resources is the duty of all New Zealanders, and Scouts should take the lead in setting an example in this matter.

Trees play a very important part in our country's economy, and we still depend on the forests to provide us with our basic home and furniture building materials. In addition, tree life is essential to preserve our rivers and countryside from the effects of erosion, and of course, they are essential in the life of our native birds.

For these reasons **Scouts do not cut down a living tree unless it is absolutely essential.**



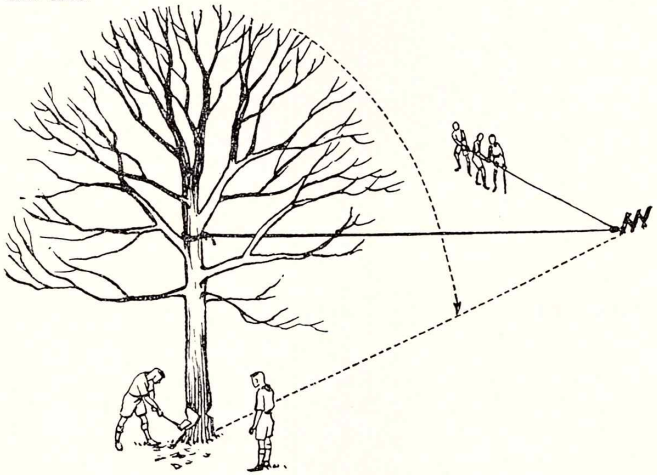
Before starting to fell a tree, decide in which direction it is to fall. This will be determined by the lay of the land, the natural lean of the tree, the side of heavier growth, even the prevailing wind. Avoid having the tree lodge in another tree when it falls as the removal of a lodged tree can be very dangerous.

The first scarf is made on the side to which the tree will eventually fall.

Remember all the rules about using a felling axe.

Estimate the width of the scarf, and, if necessary, start two notches as top and bottom of the scarf such that they will come together as a single notch, just past the centre of the tree. The bottom of the notch is almost flat, or sloping slightly upwards. The top slopes sharply downwards. Remember that an accurately placed cut is more effective than random cuts, and big chips are the sign of a good axeman.

Having passed the half-way mark, start a second scarf on the other side of the tree, and a couple of inches above the first. Make sure to keep everyone clear until the tree falls. When you hear the tree start to crack, yell "timber" and step to one side. Sometimes the butt of a tree may shoot backwards, and for this reason you must move to one side.

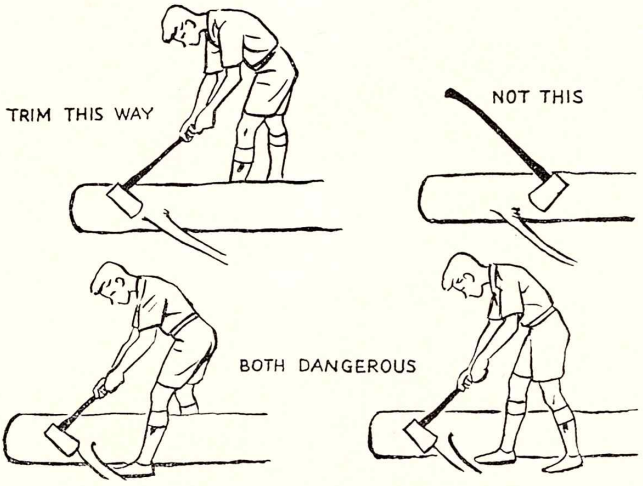


TRIMMING A TREE

Give a fallen tree time to settle, as it may be resting on a limb which will break and allow the tree to roll.

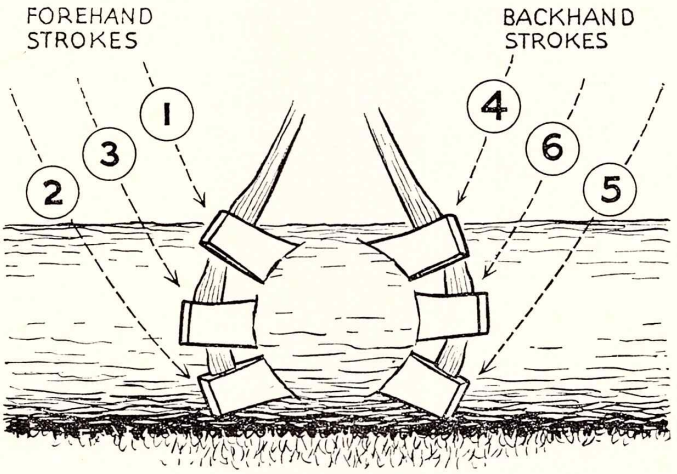
Working from the butt upwards, cut off twigs and branches. Small branches can be cut off with a single blow of the axe from the underside upwards. Larger branches should be taken off by cutting a notch on the higher side and then the lower. This prevents splitting the main trunk.

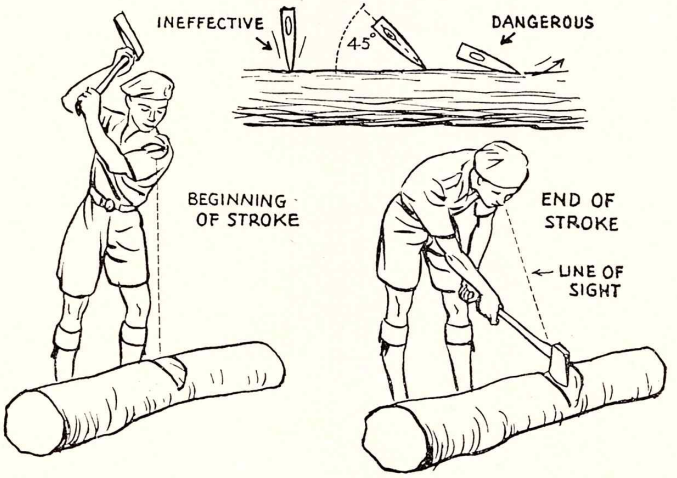
Wood should be sorted into piles according to thickness. Long pieces can be cut into suitable lengths by axe or better still by a bushman's saw.



LOGGING UP

Logging up a piece of timber or tree trunk is cutting it up into logs or pieces of usable size. A cross-cut saw worked by two people each pulling the saw in turn (not pushing) is often used and less wood wasted. Logging up can be done with an axe scarfing the timber on both sides if necessary.


FOREHAND
STROKES
BACKHAND
STROKES
1
2
3
4
5
6

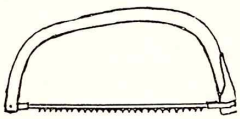

INEFFECTIVE
45°
DANGEROUS
BEGINNING
OF STROKE
END OF
STROKE
LINE OF
SIGHT

SAWS

Saws are very useful things in camp and you should have one at least in your Patrol box. The best sort for your Patrol is probably a Bushman's or Swedish Bow saw. In addition, it's useful to have a little folding pruning saw.

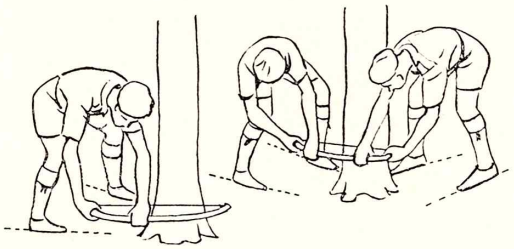
With a bow saw you will find it easier to cut firewood than with an axe. Of course, you will still need an axe to split it, but a bow saw will cut it to length faster and with less chips.

Here is what a bow saw looks like:

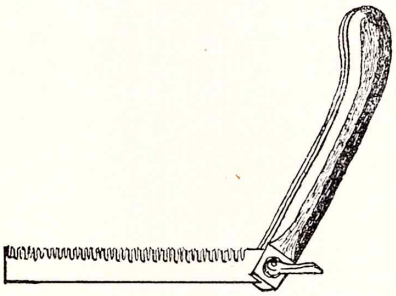


As with every other tool, you have to keep it sharp and look after it. It's fairly difficult to sharpen a bow saw, but new blades are very cheap and easily fitted. Make sure that you wipe it dry after using it, and oil it before you put it away.

When using the bow saw, start very slowly, otherwise it may jump out of its groove and may easily cut you. Once the edge of the saw has a firm grip on the wood you can go as fast as you like. Remember also that it's a pretty awkward shape and don't leave it lying round on the ground or someone—even you—is likely to fall over it.



A folding pruning saw looks like this:

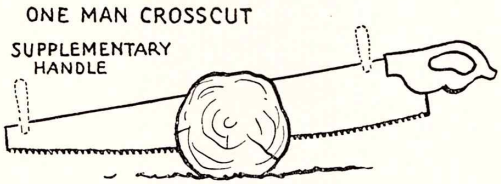


As you can see, the blade folds down into the handle and this makes it safe and easy to carry. You use it like an ordinary saw that you use at Woodwork and it's very useful for making gadgets.

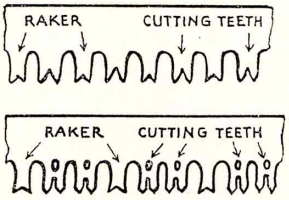
Cross-cut Saws

These are large saws and are used for tree felling or logging up. You may use them for logging up but you have to be a real expert to use them for felling a tree.

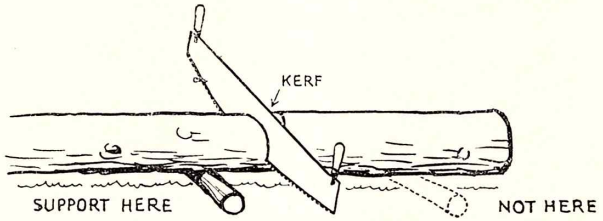
Here is what they look like:



Here is what the teeth look like:



As you can see, some of the teeth are called "cutting teeth", and these are the teeth that actually cut the wood. The other teeth are called "rakers", and the purpose of these is to clean out the sawdust and prevent the cutting teeth from becoming clogged up. As you can see, some of the larger cross-cut saws have detachable handles, and if you use one of these make sure the handles are put properly and firmly in place.



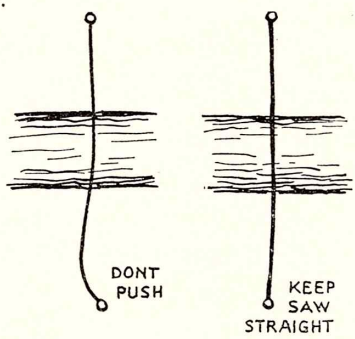
To cut up a log with a cross-cut saw it's a good idea to put a support under the log on one side of the cut:
Make sure the log won't roll as you start to cut it.

Using the Saw

You will want another Scout to help you use the saw.

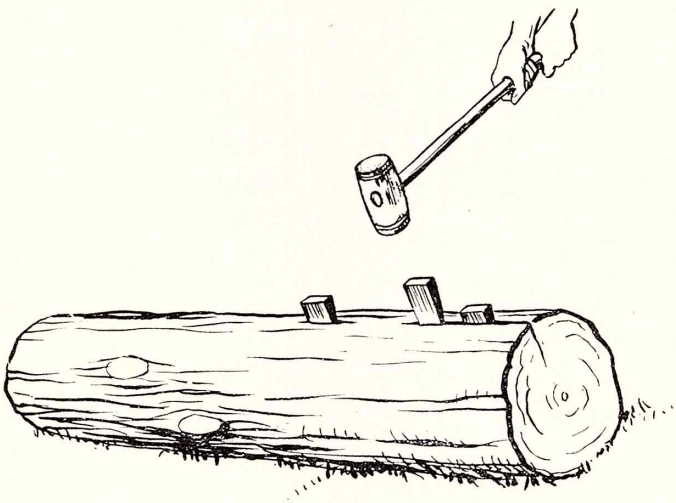
- Take the bark off the trunk where you are going to cut it with an axe.
- Put the saw on the log and stand on opposite sides of the log with the saw in your right hands.
- Make sure that you have a good solid footing.
- PULL the saw—never PUSH it—if you push the saw it will bend, so keep it straight and pull it towards you in turn.
- Don't try to work it fast. Get a good even rhythm.
- If the log is a thick one you may have to put a wedge in the saw cut to hold it open.

When you have finished, wipe the saw dry and oil it. Sometimes if you are cutting a resinous timber like pine it's a good idea to wipe the saw from time to time with kerosene to keep the resin from clogging the saw.

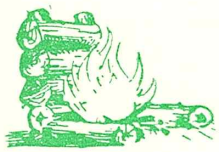


MAUL AND WEDGES

To split a large log along the grain it is a good idea to use a maul and wedges. A maul is simply a large mallet—and a wedge is just a wedge-shaped piece of steel. The picture will show you how to use these. When you finish, check to see that you have the right number of wedges—they are easy to lose—wipe them dry and oil them, before you put them away.



fire lighting



For your Second Class you have to light a fire out of doors with natural materials, using two matches only. New Zealand is now divided into Fire Districts and sometimes there are prohibitions on lighting a fire outside. Check with your Scouter before you light a fire or before you go out on a hike. These prohibitions are to conserve the bush and you will want to do your part in that. You must also use your commonsense and courtesy when you light a fire.

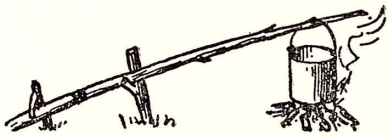
Here's how:

- Always use an existing fireplace if one is available—or make one.
- Always leave a properly made fireplace standing.
- Never light a fire against standing timber, dead or alive, or against stumps or logs.
- If the weather has been very dry, clear a good space around the fireplace in all directions.
- Never leave a fire unattended—even temporarily.
- Don't waste firewood.
- Always put a fire out with water if available. If not, smother it with sand or earth.
- If you use a fireplace, leave some wood under cover if you can for the next person.
- If you have to light a fire in a grassy paddock, remove the turf and protect the remaining grass with stones. Remember to keep the turf damp and replace it when you leave.

Making a Fireplace

There are many types of fireplace and you will learn about them as you go along. Here are two which you can use:

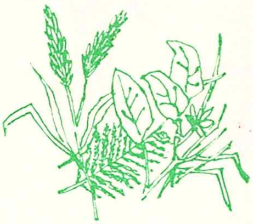
These fireplaces are good for day hikes or when you go for a picnic with your family. More complicated ones are described under Camping.



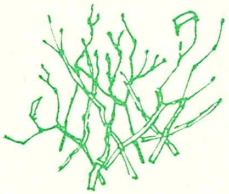
REMEMBER ALWAYS TO PUT YOUR FIRE OUT BEFORE YOU LEAVE IT, AND REPLACE THE TURF IF YOU HAVE REMOVED IT.

To Light your Fire

Remember **natural** materials only—no paper!



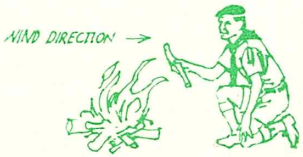
1. Absolutely dry leaves or grass or bark broken up finely.



2. Twigs, very thin and very dead —they will usually be drier if you snap them off a tree or shrub. Manuka or tawhai is good.

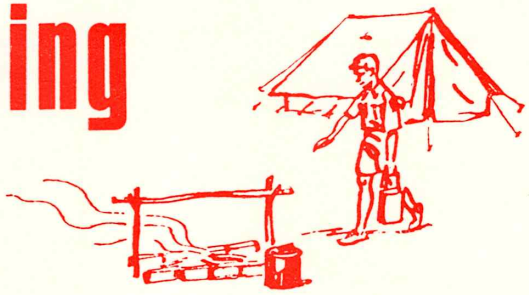
3. Thicker twigs—usually these will be found in sufficient supply to cook a meal.

4. Finally, larger wood—use dead wood only. Wood burns better if it has been split. You'll find how to do this in Axemanship.



5. Light your fire from the side the wind is coming. When it is burning add wood on the down wind side.

camping



There are certain features which distinguish Scout camping from other forms of camping, and B.P. made this clear when he wrote:

"There is a difference between camping and living under canvas. Camping does not mean roughing it—the old backwoodsman knows how to look after himself and to make himself comfortable by a hundred little dodges. It doesn't matter what sort of camps they are . . . as long as they are full of activity and good fun."

If you've already been to camp you will know this already but, if you haven't, one of the first things you will learn is that only a tenderfoot is uncomfortable in camp. A Scout won't be uncomfortable in any weather. His tent will be well pitched and will keep the rain out, his bedding will be aired and dry, his clothes well looked after and dry, and his meals will be well cooked and satisfying.

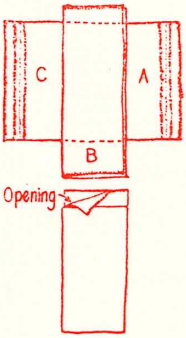
Keep your own personal log-book, in which you record where and when you camped. When the time comes for a check to be made on the camping requirements for the First Class badge, your own log-book will provide an attractive record of your camping experience. Don't forget to illustrate the book with sketches and photos.

In your log-book, you should include a list of personal gear for camp, which you can use as a check list when you pack your gear for each camp. It could also contain your own list of rations—how much of each item of food is needed per person per day. You will find this handy when you have to prepare a menu and list of rations for a camp.

BEDDING FOR CAMP

If you can, get a down filled sleeping bag. A good sleeping bag will last a long time. If you can't afford a down bag, start with two blankets. You will need some blanket pins. Here's how to make a blanket bed:

First of all, lay one blanket flat on the ground. Fold your second blanket lengthwise in two, and lay it in the middle of the first blanket, along its shorter breadth as shown.



Now fold the part of the first blanket marked A over the other blanket, fold B on top of it, and then fold C over the top of that. Then turn the whole bed over, so that all the ends are under you, and creep in between the two layers of the blanket folded lengthwise. It is almost impossible to wriggle out whilst asleep.

The secret of sleeping warm in camp is to have more blankets underneath you than on top, as the cold rises from the ground.

Whether you have a sleeping bag or are using blankets, you **must** have a ground sheet. This is a waterproof sheet which you will put under your sleeping bag or blankets at night. A waterproofed japara one is best and, provided you roll it up and don't fold it, and redress it from time to time, it will last a very long time. If possible get it a little longer than your sleeping bag, as it is then handy to put your pack on while you are asleep and keep it dry. Whatever sort you use, a ground sheet **must** be waterproof.

PACKING YOUR PACK

This may sound a bit Irish, but there are good and bad ways to pack your gear into your pack. Your P.L. will help you with this. Here is one good way:

GEAR FOR A WEEKEND CAMP

Your Scouter will tell you what you should take to camp both for weekends and for longer camps, but here's a check list.

- **Put your name on everything.**
- Set your gear out into heaps like this:

Sleeping Gear

Waterproof groundsheet
Two blankets and pins OR
sleeping bag

Toilet Kit

Soap
Comb
Toothbrush and paste
Towel

Repair Kit

Needles
Thread
Buttons
Safety pins
Bootlaces

Personal First Aid Kit

Emergency Kit

Clothing

Complete Scout uniform
Pyjamas
Change of underclothing
Sweater
Camp dress
Spare shirt
Shorts
Socks
Swimming trunks
Spare shoes or sandshoes
Parka or raincoat
2-3 handkerchiefs

Eating Gear

Two enamel or aluminium plates
Enamel or plastic mug
Knife, fork, spoon
Tea towel

- Remember what has been said about putting your gear into bags.

cooking

Cooking is a good thing to know and to know how to do well. For your Second Class you have to cook porridge, twist or damper, a quarter of a pound of meat and two potatoes and make tea or coffee. Not very hard but a useful start.

MAKING A COOKING FIRE

Cooking on an open fire needs a lot of embers—you don't need a roaring fire but you do need a constant supply of good hot embers. Not only can you control the heat more easily with embers, but you make less smoke and burn less wood. Get a good hot fire going and stoke it up well. Get about an hour's supply of wood before you start. While the fire is burning down to embers, start your preparations. Let's do the damper and twist first:

1. Get the things out of your pack and put them in a handy place—on a fallen log or on a bank if you can.
2. Gather the firewood you will want.
3. You know this already—**wash your hands** and remember if you have to stoke your fire while you are cooking, wash your hands each time before you recommence to cook.

THE MIXTURE

Take a cup of flour and mix in 2 teaspoonfuls of baking powder. If you use self-raising flour you won't need the baking powder. Pinch of salt and mix with water. Mix **slowly** adding a little water at a time because you want the mixture very stiff and not runny.

TWIST

Peel the bark off a green stick about 1 inch diameter—manuka is good. Heat the stick over the fire. Roll the dough into a long snake about ¾ inch in diameter and wrap it around the stick. Bake over the embers. Turn the stick around so that it cooks evenly and doesn't just burn in one place. When it is cooked it should slide off the stick in one piece.

DAMPER

Make the same mixture as for twist. There are several ways of cooking it but here are two:

1. Bake it in a greased frying pan over the embers; or
2. Wrap it in a piece of aluminium foil—your Scouter will tell you what thickness to get—and put it in the ashes. It should be cooked in about ten minutes, but you can tell by pushing the end of your knife into it. It's cooked when the knife comes out clean.

PORRIDGE

If you are using Oatmeal, it's best to soak it overnight, or at least see that it is well wet before you start cooking it. For quick cooking packet oats, follow the directions on the packet.

With oatmeal you will want about three-quarters of a cupful for two people. Add a teaspoonful of salt and bring it slowly to the boil, stirring it all the time. If you don't keep stirring it, it will have lumps in it—a sure sign of a tenderfoot!

MEAT AND POTATOES

The easiest way to cook these is in a Hunter's Stew. It's easy and very good if you do it well.

Cut the meat into small pieces. Put a little fat in your billy and brown the meat on all sides. It's a good idea to coat the meat with a little flour before you brown it. When it's brown, cover it with water and simmer—not boil—it for about half an hour. Peel your potatoes, cut in small pieces and add them to the meat. Add a little onion and carrot chopped up and some salt and continue cooking it until the vegetables are soft—about twenty minutes more. Then mix up a little flour and water in your mug and put it in the stew, stir it slowly and bring to the boil.

MAKING TEA

You will need a hot fire for this, so throw a few bits of light wood on. Boil the water and when it comes to the boil take it off the fire and add a teaspoonful of tea for every cup of water and one for the pot. Put it quickly back on the fire and bring to the boil again rapidly. When it has boiled take it off and bang the outside of the billy with a stick to settle the leaves. This is New Zealand billy tea—the best there is! You should keep a special billy for tea making, as if you use a billy in which you have cooked a stew the tea may turn purple.

Now you're ready to learn to cook. The best person to teach you is Mum—of course, she may not know much about how to cook over a camp fire, but get her to teach you at home, then teach yourself to do it in camp.

The more hiking and camping you do, the more necessary will it become for you to be able to cook well and to cook a wider variety of food. In any case, you will want to do more than was required for your Second Class and there is more cooking for your First Class.

What your First Class test requires is that you should produce a well balanced, well prepared and nourishing meal served in a clean

and orderly way. You will also be responsible for estimating the quantities of foodstuffs to be prepared and to serve it to an uncomplaining Patrol sitting down comfortably. All of you will, of course, be good mannered and observe all the habits of good eating.

QUANTITIES OF FOOD

These are a good general guide but your Patrol may well have favourite dishes which are not included and may like more of one thing than the list would give them. The lists are based on a Patrol of six.

For one meal

Bacon, 1½ lb
Beans, ¾ lb
Biscuits, ½ lb
Butter, ½ lb
Cheese, ¾ lb
Fish, 2½ lb
Fruit (fresh), 2 lb
Fruit (dried), ¾ lb
Jam, ¾ lb
Meat (roast), 2 lb
Meat (stewed), 1½ lb
Meat (cold, e.g. ham), 1¼ lb
Oatmeal, ½ lb
Potatoes, 3 lb
Rice, ¾-1 lb
Sausages, 2 lb
Tea (cocoa, coffee), 1 oz
Treacle or syrup, ½ lb
Vegetables, 3 lb

For one day

Bread, 6 lb
Fresh milk, 4 pints
Sugar, 1 lb

On cold days your Patrol will probably eat more bread and potatoes, whereas on hot days they will neglect them for salads and fruit.

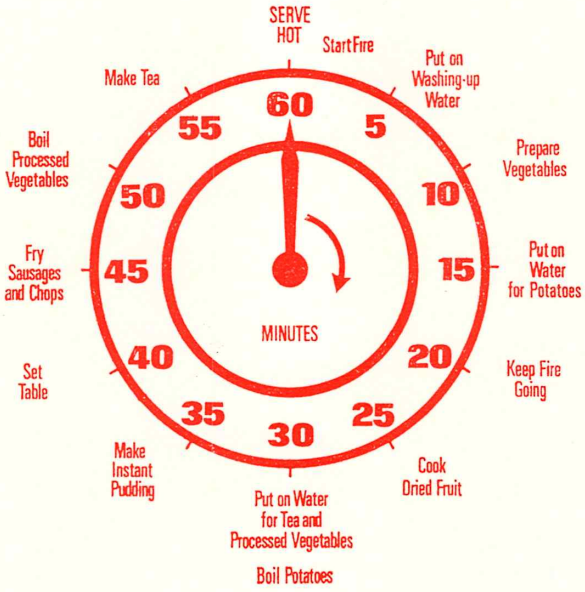
A MEAL PLAN

The secret of preparing a meal successfully and punctually is to do things in the correct order. It's no good having the vegetables burning while the meat is cooking. Suppose you are having:

Grilled chops
Potatoes, peas, beans
Rolypoly pudding and custard
Tea

- Two and a half hours before meal, make the pudding; two hours before, put it in boiling water.
- One hour before meal, put on the washing up water.
- Prepare the vegetables.
- Forty-five minutes before the meal, put on the water for the vegetables.
- Half an hour before the meal, put on the water for tea and put potatoes and vegetables on.
- Twenty minutes before the meal, heat the milk for the custard—set the table.
- Fifteen minutes before the meal, start to grill the chops.
- Ten minutes before the meal, make the custard.
- Five minutes before the meal, strain the vegetables, mash the potatoes.
- Serve on time.

Here is a meal plan on a clock face:



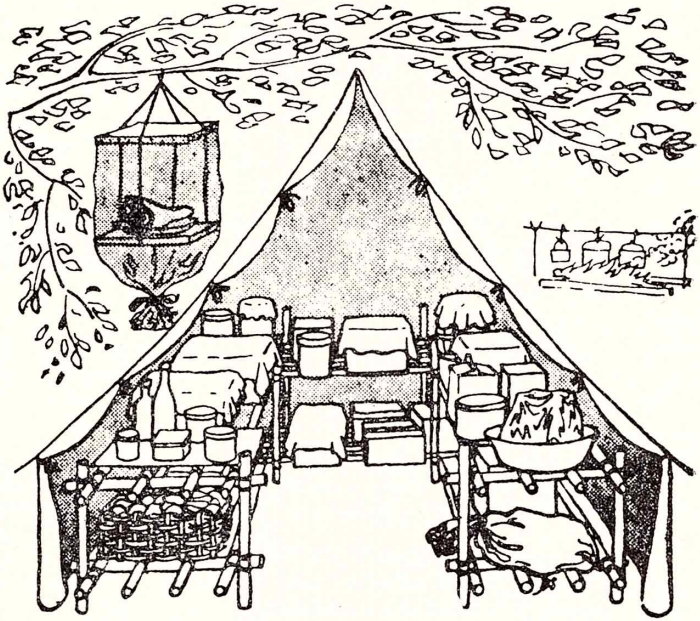
Notice that everything to be served is cooked within an hour.

CAMP HYGIENE

Storage of Food in Camp

For a Patrol weekend camp you will need to take a store tent. This tent will only be used to store your food and great care should be taken of how you store it. First of all, packets and paper bags are not much good for storing things in camp. Aluminium jars, plastic bags, tins, etc., are much better.

One of the first things you should do when you arrive at your camp site is to erect your store tent and put your food into it **properly.** Make a series of gadgets that will hold all your food off the ground. You cannot be too careful with the food you will eat. Here's a suggestion:

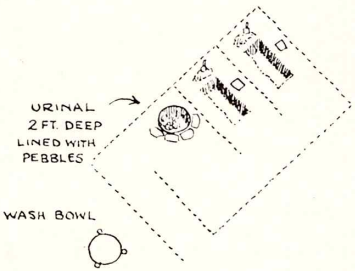


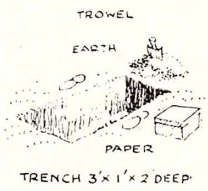
Milk, Butter and Meat

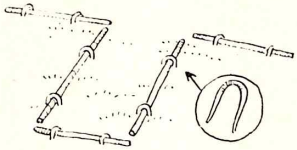
In dealing with hiking some suggestions were made as to how you should store milk, butter and meat. If you can, it's a good idea to take a folding metal safe, but only if you can be taken to your camp site by car. They are too awkward to carry any distance.

LATRINE

You should make arrangements for a latrine as soon as you can even if you are only camping in the area for one night. Here's how to do it:







"SPARROWS" ARE GREENSTICKS HAMMERED TO MAKE PLIABLE

Of course, if you made a latrine for an annual camp it would be properly screened. In any event it should not be too obvious. Before you go you will have to fill the latrine in and mark the area with the foul ground sign.

CAMP LAYOUT

There are, as you can see, a lot of jobs to be done, and unless everyone helps they will take a long time to do. If you are at a Patrol camp your P.L. will organise your patrol something like this:

Plan your Camp Layout

All of your Patrol as a Patrol in council will discuss this. The P.L. will tell you why he suggests where the various areas should be. This will depend on a lot of things, but here are a few of the things to consider:

- Tent on level ground not likely to flood.
- Have the tent on the windward side of kitchen and latrine.
- Locate your grease pit in an annexe to the kitchen.
- Arrange a place for the woodpile and the chopping block.

Having made your decision, let's get about it:

Tents: Four Scouts to pitch the tents. When your sleeping tent is pitched and all your gear inside, two Scouts to erect store tent and store food correctly.

Fireplace: Two Scouts make a fireplace.

Collect firewood: The two Scouts who have finished erecting tents should do this.

Fetch water: One Scout.

Lay fire—prepare meal: Two Scouts.

Make gadgets: Two Scouts.

Dig latrine: Two Scouts.

Make latrine: Two Scouts.

Make grease pit: Two Scouts.

You see there's a lot to be done and everyone must help. Your P.L. will tell you what to do and will see that you get to know how to do all the jobs.

If you practise hard as a Patrol you'll soon be the best in the Troop at erecting a camp.

The last thing at Night

1. Clean your teeth and wash.
2. Cover your water bucket and your woodpile.
3. Rake the ashes over your fire to keep the heat in.
4. Check to see that no Patrol gear has been left out.
5. Check the guy lines of your tent.
6. Prayers before lights out.

And in the Morning

1. Blow up your fire and get some water on.
2. Wash—no half measures.
3. Brail up the tent and hang out your bedding and pyjamas to air, if fine. Two of the Patrol will start getting breakfast.
4. Eat breakfast and wash up.
5. Clear tents and arrange kit for inspection even if there's no Scouter inspection.
6. See the camp site is shipshape.

Now you're ready for the day. Your P.L. will have lots of things for you to do. Make sure to tell him the things you like to do so that he can include them in the activities.

END OF CAMP

That's the trouble with them, they do come to an end and you've got to go home. Once again you'll need a plan to see that everything is done, so here's a suggestion:

1. Leave your tents until the dew has dried off them.
2. Make sure all the garbage is burnt. You should have done this as you went along, but make sure of it. Don't bury food—it attracts the rats.
3. Bury the tins you have used. You will have burnt and bashed them before but bury them fairly deep. If you are on a permanent camp site either put them in the rubbish tin or take them home. Do not burn aerosol type tins as this is very dangerous—take them home with you and put them in your rubbish tin.
4. Fill the latrines and grease pit and mark them.
5. See that your fire is out. Replace the turf if you have taken it off.
6. Pick up **all** the rubbish lying around your camp site.
7. Make a final check.
8. Don't forget a good turn to the owner.

Remember what B.P. said:

"Remember also the two things you leave behind you on breaking up Camp:

Nothing.

Your thanks to the owner of the ground."

Things to Do

1. Make a hay box—and use it.
2. Make a hangi—and cook your meal in it.
3. Try foil cooking.
4. Try cooking without utensils.
5. Make a camp stove and cook bread and cakes.

traffic safety

If you read the papers you will know that roads are not safe places, and Scouts should know and observe all the rules which have been drawn up for road users. You should get a copy of the Road Code which sets these rules out and you must know them before you get your First Class badge. Here are some of the important rules.

RULES FOR PEDESTRIANS

- Keep to the footpath.
- Never loiter on the roadway or on pedestrian crossings.
- Cross the road at right angles.
- Use a pedestrian crossing if you are within 60 feet of one.
- Obey the signals of a traffic officer.
- At traffic signals wait for the "Cross Now" pedestrian signal.
- If there are no pedestrian signals, cross only with the green light.
- At some intersections which are specially marked you may cross diagonally when all vehicles are stopped by the traffic lights.

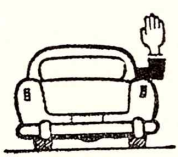
Walking along the Road where there are no Footpaths

Where there is no footpath, walk on the *right*-hand side of the road, facing the oncoming traffic. At night wear something white or carry a torch. If a number of Scouts are walking along a road at night, they must carry a white light in the front and if possible a red light at the rear.

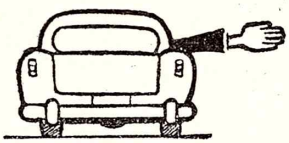
At a Bend in the Road

Walk on the outside edge of the road even if this means crossing over. Cross over well before the bend.

Here are some hand signals used by road users you should know:



STOP



TURNING RIGHT

CYCLING

You will all know that motorcars, motor cycles, scooters and trucks must have a current warrant of fitness before they may be used on the roads. This is to ensure that they have no mechanical defects which make them likely to have accidents. In the same way you should see that your bicycle is safe. Here are the things to watch.

YOUR BIKE IS NOT ROADWORTHY IF:

- The brakes do not work properly.
- The hub nuts are not tight.
- The chain is not properly adjusted.
- The mudguards are loose.
- The hub cones are not properly adjusted.
- Spokes are missing or loose.
- The sprocket wheel does not run true.
- The pedals or cotterpins are worn.
- It has no front and rear light or they are not properly adjusted.
- It has no rear reflector and white patch on the rear mudguard at least 12 square inches in area.
- The seat is not properly adjusted for the rider.
- It has no bell.
- The frame or front forks are bent or cracked.

This may sound a lot of things to look after, but if you ride a bike it must be roadworthy. Your school will have copies of a book issued by the Transport Department which is full of useful information about taking care of your bike. For your Second Class if you have a bike you must be able to keep it in good order and carry out minor repairs.

USING YOUR BIKE

You must be able to control your bike at all times. To do this the saddle must be properly adjusted. You can check it like this:

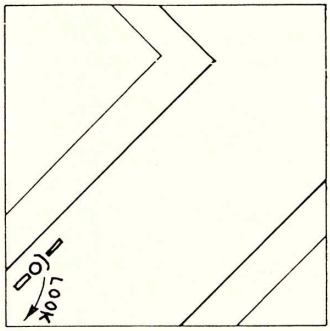
- Can you pedal with your heels without wobbling?
- Can you place your toes on the ground and balance comfortably? If you can do this your saddle is properly adjusted.
- Remember it is neither comfortable nor safe to ride with a pack on your back, something in your hand or under your arm. If you go for a cycling trip, strap your gear on the carrier or pack it in pannier bags.

RULES FOR CYCLISTS

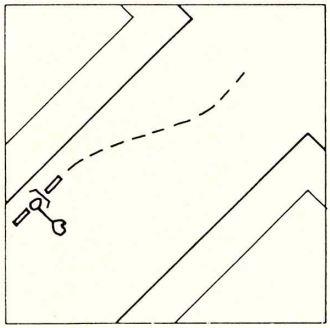
- Keep your bike safe to ride at night as well as by day.
- Keep alert—keep a safe distance behind the traffic in front.
- Keep as far to the left as possible. Ride in single file and ride straight.
- Slow down before reaching an intersection and be prepared to stop.

- **Changing direction:**

  Before changing direction glance back **well beforehand** to check on following traffic.

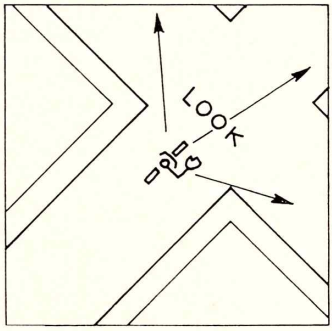


- Signal your intention **clearly** by making the **correct** hand signal for at least five seconds.

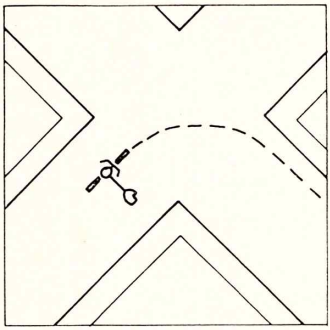


- At an intersection give way to traffic on your right and look for traffic in all directions.

- When turning to the right at corners or when crossing over to the other side of the road, give way to all traffic—from behind as well as in front.

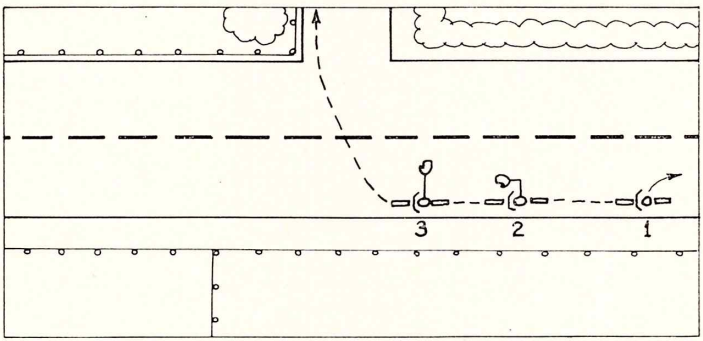


- When all is clear, turn as directly as you can with safety, using both hands to control your bike.



- **On the open road:**

  Pull to the left as far as possible and cross over when all is clear. Cross as directly as possible.



1—Look. 2—Stop signal. 3—Stop as near to left as possible. When all is clear, give right hand signal, and proceed to turn right to reach left side of other road as directly as possible.

- Treat factory entrances, rights of way, and driveways as side roads. Watch for vehicles emerging or entering, especially those which overtake and might turn left across your path.
- Before moving out to overtake or pass an obstacle, look behind, then ahead, for approaching vehicles. Remember to signal.
- Overtake slow moving vehicles on the right.
- Never hold on to a moving vehicle or follow closely behind one.
- Don't speed down hill.
- Don't double bank.
- Observe all traffic signals and signs.

ROAD ACCIDENTS

If, as the rider of a bicycle, you are involved in an accident, you are required to stop. When any person is injured, you are required to give any help you can.

In accidents in which any person is injured or damage of £5 or more to property is caused, you must, unless you cannot do so because of injuries to yourself:

(a) Give your full name and address, and the full name and address of the owner of the bicycle to anybody concerned in the accident who asks you for those particulars.

(b) If a member of the Police Force desires to know, give him details of the time, place and nature of the accident, and as far as you are able, the names and addresses of any persons who were concerned in the accident or who witnessed it. If there is no member of the Police Force on the spot to take particulars of any accident, you must, as soon as practicable and in any case within 24 hours, call at the Police Station nearest to the scene of the accident and give the necessary particulars.

Good reporting depends on good observation and good memory, and these in turn depend on the alertness of the senses and the quickness of the mind in taking in the events which the senses record. There is endless opportunity for practice in this.

Remember, the report should be based on what actually took place. It is very easy to start deducing from what has been seen or heard and mixing deduction with the report. If the deductions are false, the whole report may be wrong. Concentrate on what definitely happened, and in making the report, distinguish what is fact from what "seemed" to happen. The longer the interval between the incident and the report, the more likely deductions are to be put into the report as facts.

The Police will be interested in such details as the following: Time, date; names of people involved, with address if possible; names and addresses of witnesses; vehicles involved, including details of make and registration numbers where applicable; approach and position of vehicles, width of road, skid marks, etc., which may best be shown on a sketch map of the scene of the incident; details of weather and road surface.

Doctors will require reports concerning any injuries which may have occurred and such reports should also state whether an ambulance will be required for the removal of patients. The exact location is important in summoning medical aid. If a doctor is needed he should not be allowed to waste time getting lost or looking for the scene of the accident.

THINGS TO DO

1. Find out how to adjust the chain, hub cones and saddle.
2. Learn to repair a puncture.
3. For First Class you will have to demonstrate the principles of controlling traffic. Get your Scouter to ask a traffic officer to talk to you about this and also about road safety.

find your way

Finding your way is the highway to adventure. Anyone can read the Automobile Association signs which tell you how to get from one place to another, but for a Scout the real adventure is to be able to find your way without help from anyone else just by using a compass and a map.

No one can become an explorer or tramp in the back country of New Zealand unless he is able to find his way by using these aids. If you are to become a real Scout you will just have to learn to do this. It isn't hard but it does need practice. Do you know about Francis Chichester? He was a very famous New Zealand air pioneer. He made the first flight from New Zealand to Australia solo in a single-engined seaplane. He flew to Australia via Norfolk Island and Lord Howe Island. At Lord Howe Island his plane was wrecked and most people might have been tempted to give up, but not Francis Chichester. He set about, with the help of the people of Lord Howe Island, to rebuild his plane. After he had done this he flew to Australia. Not long ago you may have heard that he sailed a yacht to America from England single-handed. You should get a book about him out of the library and read about all his adventure. Among the other things he did was to develop what is called astro-navigation—that is, finding your way by the stars. When he was teaching himself how to do it he would get on his bicycle and take his sextant—a device for measuring the angle of the sun or the stars above the horizon—and his nautical tables—which helped him translate these angles into his position. He would then find out where he was in this way and check it against a map. When he came to fly the Tasman he was able to fly his plane and navigate it so well that he could make a successful landfall at Norfolk Island nearly 500 miles from New Zealand.

I've told you the story about him just to show you how practice can help you learn to find your way. And you should practise just as he did.

To have this sort of adventure all you have to do is to get to understand compasses and maps and how you can use them to help you find your way.

THE COMPASS

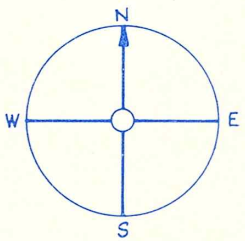
The Chinese knew about compasses about 3,000 years before they were heard of in Europe. Marco Polo is said to have brought one back to Venice in about 1260. Before that time men had already found ways of knowing where they were. They used the stars and the sun. The North Star showed them where North was and they could also use the sun. But, of course, this wasn't much good if you couldn't see them. Get your Scouter to tell you about Maori navigation—or find out for yourself.

The great advantage of a compass was that it would show you where North was even though you could not see the sky. At first it was a lump of ore—called lodestone (leading stone)—hung up by a thong of leather. Later a magnetised iron needle was used and the compass we know today developed from this.

For a start let's make a compass. All you need is a magnet, a needle, a piece of cork, and a saucer of water.

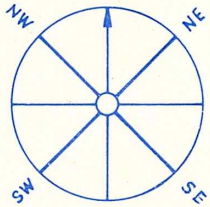
Magnetise the needle by stroking it with the magnet, always in the same direction and always with the same end of the magnet. Then put it on a small piece of cork to float it on the water in the saucer. It should point North and will always point in this direction.

The needle of your compass will point North and South and you have learnt the first two cardinal or main points of the compass. If you look down on the needle, a line at right angles to it on the left side will point West and on the right side will point East. These are the four cardinal points of the compass. All the other compass points are made up of combinations of these names.



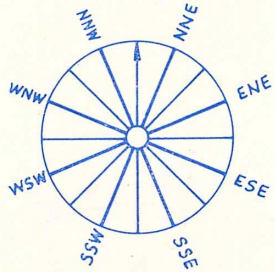
Cardinal Points

Half-way between these cardinal points are the half-cardinal points and these are named by the simple method of joining together the names of the cardinal points between which they come. Remember, however, that North and South always come first and we talk of North-West and South-East.



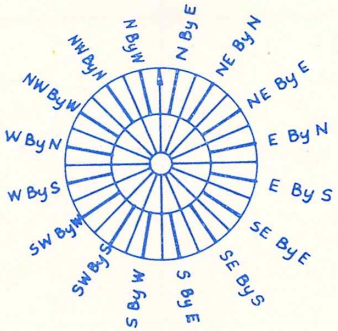
Half-Cardinal Points

Between the cardinal and half-cardinal points eight further points are inserted and are named in the same way as the half-cardinal points—by joining together the names of the cardinal and half-cardinal points between which they come.



Intermediate or Three-letter Points

Finally, there are a further sixteen points, and to make them easier to refer to they are not named in quite the same way as the half-cardinal and intermediate points. For this reason they are called "by-points" and the drawing will show you why. Notice that the first letter of a "by-point" is either a cardinal or half-cardinal point and the last letter is **always** a cardinal.



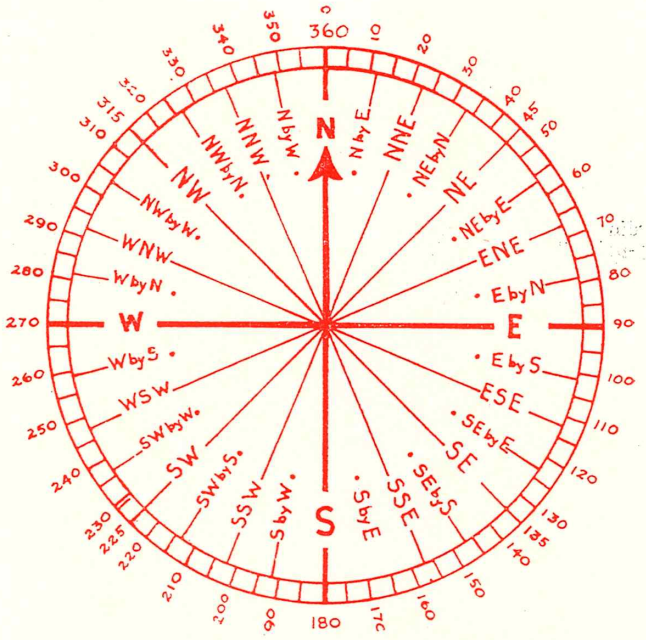
By-points

As well as referring to compass directions in this way, you can refer to them by degrees. You will already know from your arithmetic book that a circle is divided into 360 degrees. Here is a compass rose which shows all the points of the compass we have talked about and the degrees. You will see that the degrees represent the angle between North or 360° and the compass direction always measured in a clockwise direction. Thus East is also 90°, South 180° and West 270°.

Now you will see that all compass directions have in fact two names and you will find when you come to the section on map **and** compass how important it is to know about degrees.

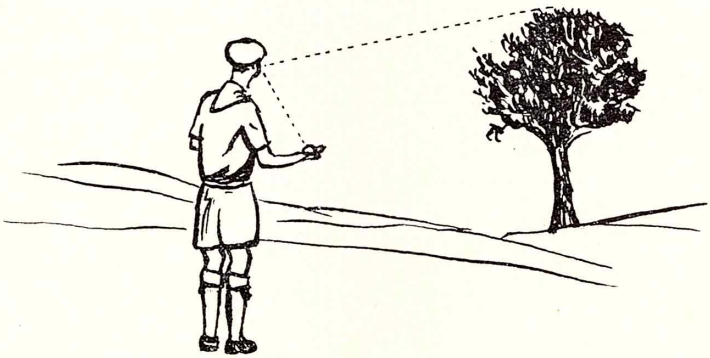
Now you should get hold of a compass and practise what you have learnt, Perhaps your P.L. will lend you one out of the Patrol box. Here are some of the things you should do. Find out in what direction your home faces, then try your school and the Scout Hall. You want to learn to relate places on the ground with a compass direction.

When you can do this you can try the next important step—walking in a set compass direction. This will require a lot of practice as it is not very easy.

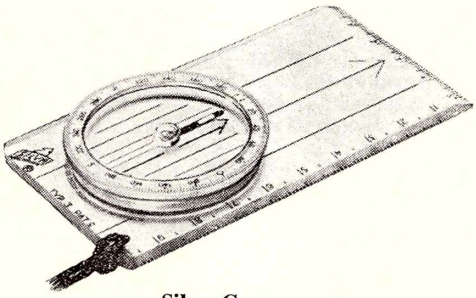


Suppose you want to walk towards the West as shown on your compass. You won't be able to walk along looking at the compass because if you do you will be almost certain to walk into something. What you must do is to select the direction in which you want to walk and look along the compass direction and pick out some feature in the landscape that lies in the direction you wish to go—a house or a tree or a hill. This is called a "fix" or a bearing. Then all you do is walk towards it—stop and check with the compass from time to time. It's a good idea also to line up a point both in the direction you want to go and in the direction 180° from it—that is, right behind you. If you have these two points fixed you will be able to get back on course if you have to make a detour over a bridge or through a gate. This is a "back bearing" and is a very useful way of keeping on your course. If, for example, you get down in a valley you might not be able to see the point in front of you to which you are heading, but you may be able to see the back bearing.

Walking in a Set Direction—or on a Bearing



If you can, you should now get a Silva compass. These compasses are not very dear and are very good. One will last you all your life if you look after it. Here is what one looks like:



Silva Compass.

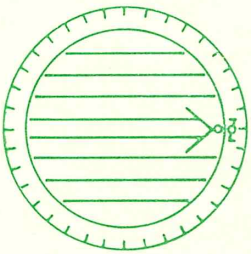
and here are the pieces it's made of so you won't try to open it up:

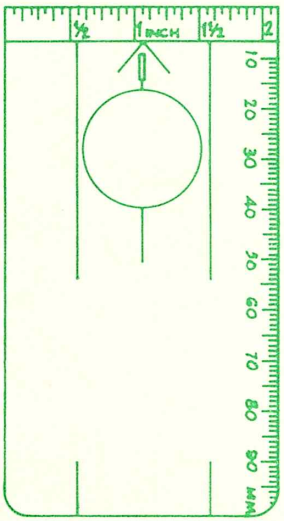
Magnetic Needle

The red end points to North and the white end to South.

Compass Housing

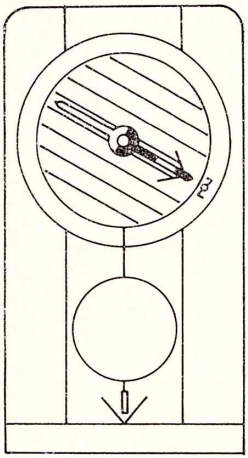
This revolves and determines any desired bearing.





The Plate

is used to indicate the line of travel.



How to Orient your Compass

This is easy—you turn the compass housing until the red end of the needle is pointing towards the letter "N" on the housing.

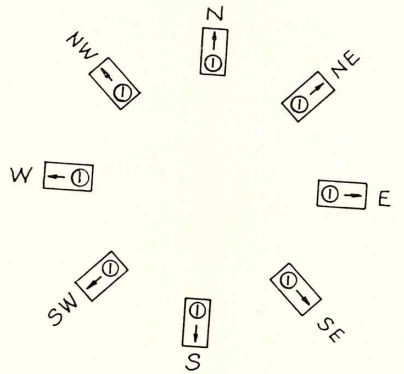
You can do this in two ways. You can either turn the housing only or you can turn the whole of the compass.

TO WALK IN A SET DIRECTION

If you have been walking in a set direction with an ordinary compass you will probably have found that this is a bit hard. With the Silva compass it's a lot easier. Here's how you do it. First set the direction in which you want to travel against the direction of travel indicator on the plate. Then orient your compass by turning the entire compass and yourself until the red end of the needle is pointing to the letter "N".

All you have to do now is walk in the direction of the arrow on the plate. Don't forget what you've learned about using a "fix".

Here's how your compass should look for walking in the main directions:

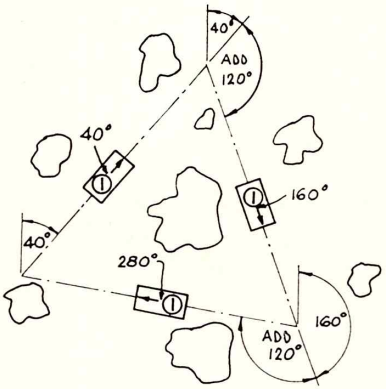


FINDING YOUR WAY BACK

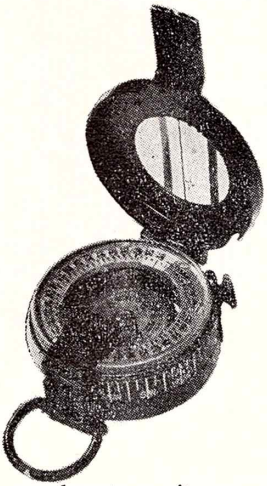
If you walk, say, 100 yards West and you wish to get back to where you started from, all you do with the Silva compass is to rotate the **whole** of the compass until the red end of the compass needle points to SOUTH, and then follow the direction of travel arrow for 100 yards and you will be back where you started from. Practise this as often as you can—it's a good idea to walk so many paces forwards and backwards as this will help you with your estimation.

Once you can do this well, try a triangular course. What you do is this. Pick a bearing to walk on, say, 40°; walk, say, 200 paces in that direction. At the end of the 200 paces alter your course by 120° —that is, walk on a new bearing of 160° for 200 paces. When you get there, stop again and alter your course by a further 120°—that is, walk on a new bearing of 160° plus 120°—280° for a further 200 paces. You should now be back where you started from. You will have practised estimation as well as compass and have some fun as well.

All the bearings you have been using at this stage are magnetic bearings—the problem of the magnetic variation gremlin is still to come after you have learnt about maps.



Once you can do these things with a Silva compass, practise them with any other type of compass you can get. Perhaps your troop has a Prismatic compass like this:



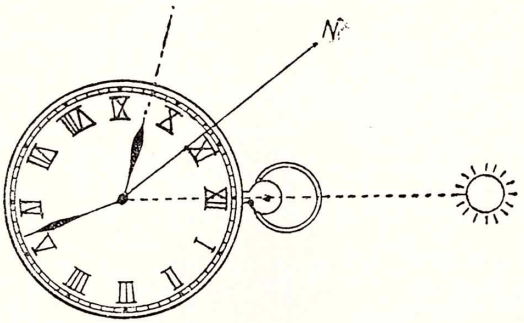
Get your P.L. to show you how to use it.

FINDING DIRECTION WITHOUT A COMPASS

There are several ways of finding direction without a compass. Here are two which are easy to learn and which can be very useful.

Finding North with a Watch

- Make sure the watch is telling the correct time.
- Point the 12 o'clock figure at the sun.
- Divide the angle between the hour hand of the watch and the 12 o'clock figure on the dial **equally.**
- This line will point towards North.

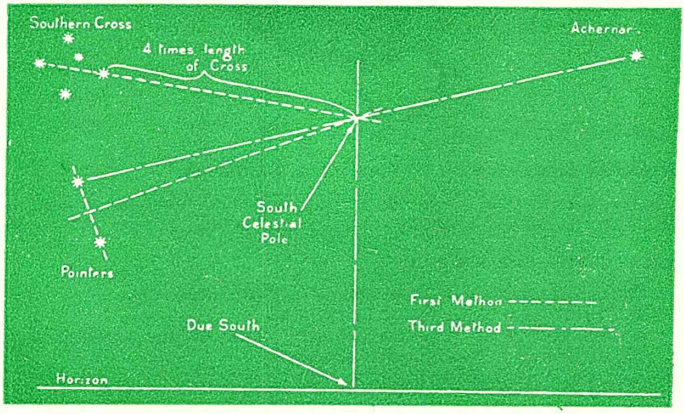


Finding South by the Stars

In the Southern Hemisphere it is easier to find South by the stars—but, of course, having found South you will be able to find where North is.

First Method: When you can see the Southern Cross and its pointers, but Achernar is hidden by a cloud. Imagine a line drawn through the long arm of the Cross and continuing across the sky. Imagine a second line joining the pointers. Then a third one cutting the second one in half and at right angles to it. Where this third line cuts the first line is due South.

Second Method: When you can see the Southern Cross but neither the pointers nor Achernar. Imagine a line drawn through the long arm of the Cross. Continue this line four times the length of the Cross and this is due South. This method is not an accurate as the first.



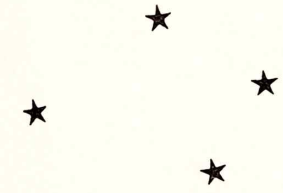
FINDING THE SOUTHERN CROSS

Because you can use the Southern Cross to locate South, it means that this group of stars revolves around the South Pole, or more properly the South Celestial Pole. While the long axis of the Cross will always point South, it will look different at different times of the year, different hours of the night, and at different distances from the Equator.

Here is how the Cross looks at a latitude of 34° South—Auckland at 9 p.m. The further South you come from Auckland the higher the Cross will rise in the sky.

February

Lies to S.E. about one-third of distance between horizon and a point overhead.



August

Lies to S.W. about half-way between the horizon and a point overhead.

May

South nearly overhead.

November

Due South close to horizon.

For other months check for yourself.

THINGS TO DO

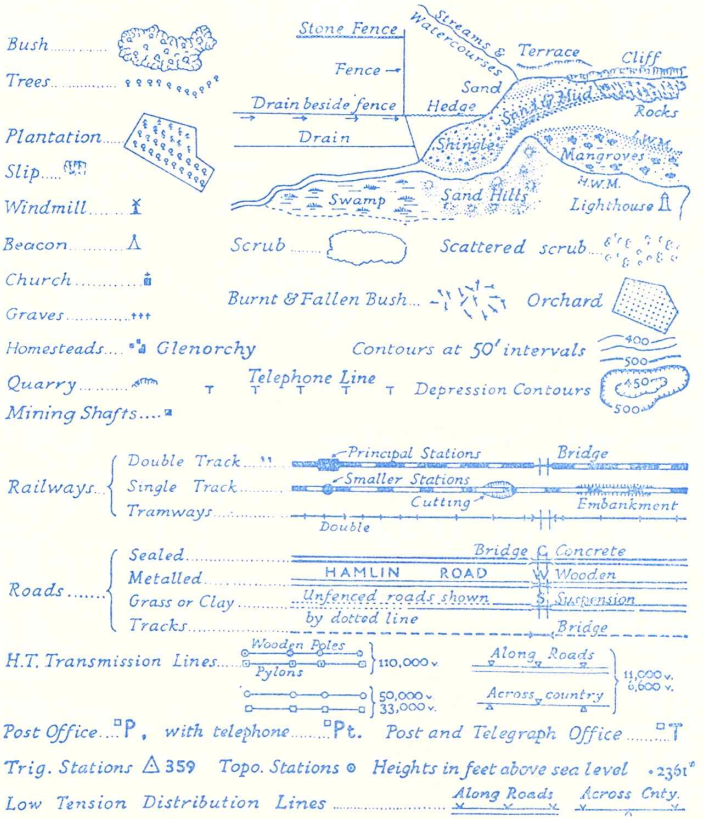
1. Check all these methods of finding North against the compass.
2. Find another way of finding North from the Southern Cross.
3. Make a sun compass.
4. Keep a record of the movements of the Southern Cross.

USING A MAP

WHAT IS A MAP?

A map is a picture of a piece of land something like it would look if you were flying over it in a plane, or perhaps if you were looking down on it from a high hill. As you look down you will see roads and houses, forests and scrub, rivers and sea. On a map these are now represented by what are called **conventional signs.** At one time map makers used to make little drawings of the actual house or church in more or less the right places, but the more of them there became the more impossible this system became. To get over this, map makers today use the same symbol to represent a church which you can recognise as a church but doesn't in fact look like a church at all.

Here are the conventional signs which are used by the Lands and Survey Department in New Zealand.



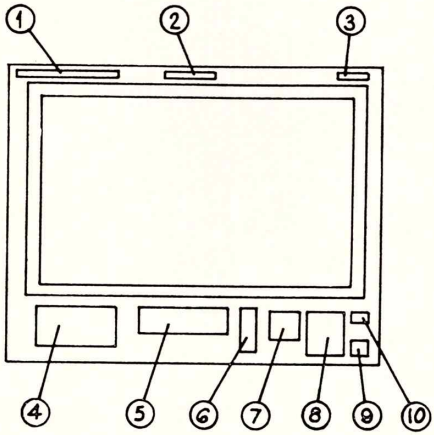
SCALE

You will have learned something about this already at school. In your arithmetic book for Form II you will find a section on scale drawing.

If you use a scale of 1 inch to the foot, 1 inch on the drawing represents 1 foot on the object itself. If the scale used had been $\frac{1}{8}$ inch to the foot, the $\frac{1}{8}$ inch on the drawing would represent a foot on the object.

Scales are used so that drawings may be a definite fraction of the full size of the object. This fraction is known as the **Representative Fraction** (R.F.). Thus when the scale used is 1 inch to 1 foot the R.F. is 1/12; 1 inch to 1 yard the R.F. is 1/36. When the scale is 1 inch to 1 mile the R.F. is 1:63,360. This is because there are 63,360 inches in a mile. This is the scale which is used on the New Zealand Topographical Maps which you will use. You should have one in your Patrol box. It is in what is called the N.Z.M.S. 1 Series. There is another series produced by Lands and Survey called the N.Z.M.S. 2 Series with an R.F. of 1:25,000, which is almost 1 inch to $2\frac{1}{2}$ miles. This series will finally replace the mile to the inch and is an international standard. Always check the scale of the map you are using and use the scale printed on it to measure distances.

You should have a map by you as you are reading this, but here is a small drawing of one just to show you where the various parts of the map are likely to be found.

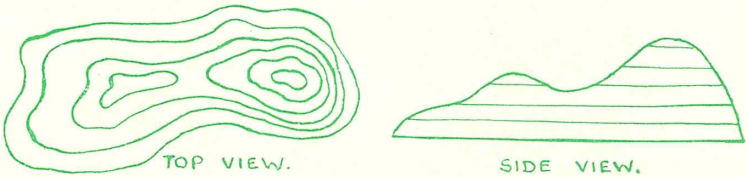


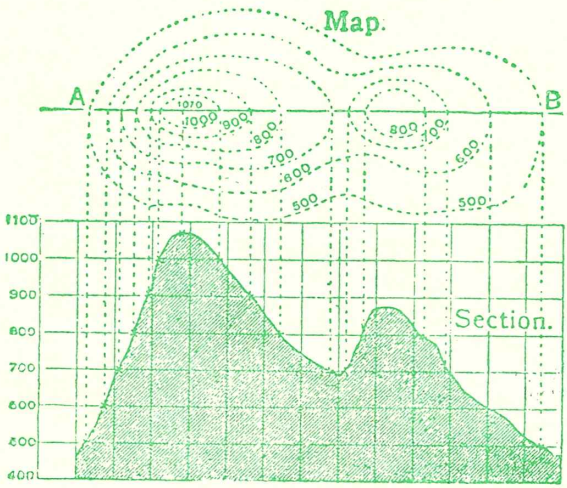
1. Series and scale
2. Title
3. Sheet reference number
4. Conventional signs
5. Scale
6. Details of mapping method
7. Magnetic variation
8. Grid reference method
9. Reference to adjoining sheets
10. Date

These may vary slightly but the positions given are usual ones.

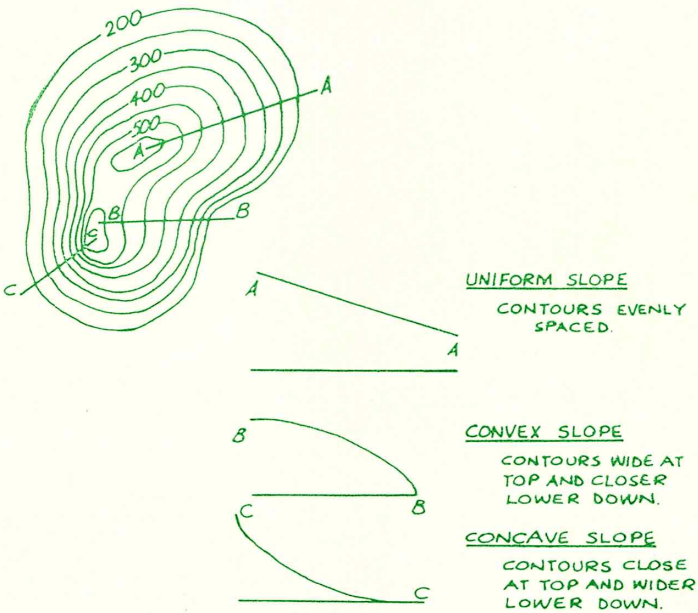
CONTOUR LINES

If you look closely at a topographical map you will see that it has a series of light brown lines drawn on it. These lines indicate the nature or the contours of the ground. That is, it shows you the "ups and downs" of the terrain. Contour lines are lines which join places of equal height above sea level, or in some cases distances below sea level. On the topographical map they are of three main types. The first are called index contours—these are slightly thicker and are in hundreds of feet. The second are called intermediate contours—these are in multiples of 50 feet. The third are contour lines—which show depressions, which are places below sea level, and these contours have small marks at right angles to them. Have a look at the map reference symbols and you will be able to identify them easily. These contour lines are generally drawn with an interval—that is, a vertical distance between them—of 50 feet. This is called the **vertical interval.**





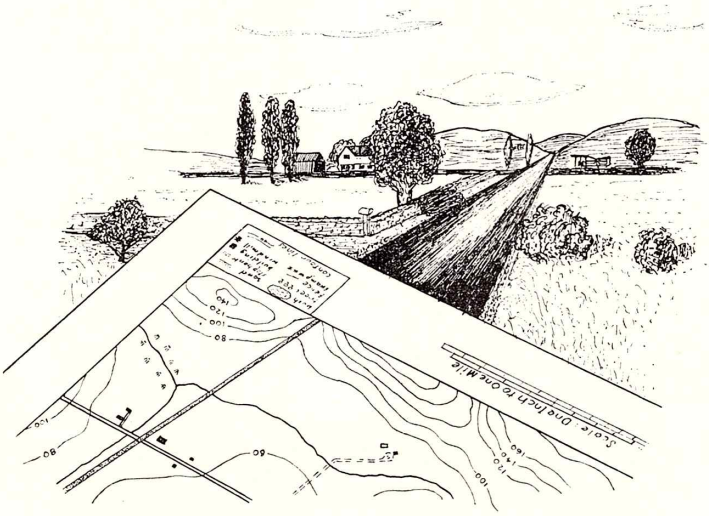
Now that you understand that contour lines show the nature of the country covered by the map, there are other important things which you can learn from them. The further the lines are apart, the less steep the country will be—the closer they are together, the steeper it will be. This is very useful information if you are trying to pick an easy route but there is much more that you can learn from them. For instance, by studying the contour lines where they cross a stream you will be able to tell which way it flows. If the contour lines are evenly spaced on a hill you will know that it will have a uniform slope; if they are close together at the top and wider apart lower down, you know the slope will be concave; if the contours are wide at the top and closer together lower down, the slope will be convex. The importance of this is that it will enable you to tell whether the ridge you are on will get steeper or easier as it loses height, and this will help you decide when and where to go down from the tops.



SETTING A MAP

Setting a map is to place it in the right relation to the piece of country it is a representation of. It's not really very difficult and it's a thing which your P.L. can explain more easily than words can describe it.

What you do is this. If you have a map of the area in which you are standing, select a major landmark, like a hill you can identify or a church or some other feature on the map, and turn the map around until it is in the same relationship to you as you are to the area in which you are standing. The map is set or oriented when the symbols on the map fit the actual features in the field. Like this:

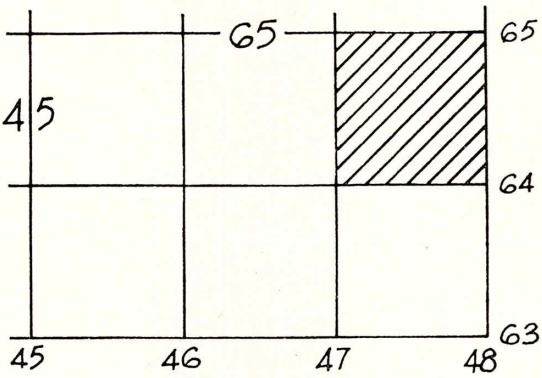


Once you have done this you can then see in what directions the various features of the map lie from your position.

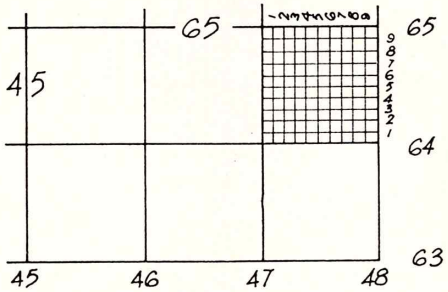
Practise this regularly.

GRID LINES

On the New Zealand topographical maps is a series of superimposed blue lines forming squares measuring 1,000 yards on each side. The vertical lines are numbered from the left to the right and the horizontal lines numbered from the bottom to the top. The vertical lines are called **Eastings,** because they run to the East, and the horizontal lines are called **Northings,** because they run to the North. Every 1,000 yard square on a map can now be defined by giving the Easting reference followed by the Northing reference:



Grid reference of shaded square is 4764. This gives a four-figure grid reference. You will see that as this covers a large area it is not sufficiently accurate if you want to define a point more exactly. To do this we divide the 1,000 yard squares into ten parts on each dimension, and this enables us to define a point within a 100 yard square.

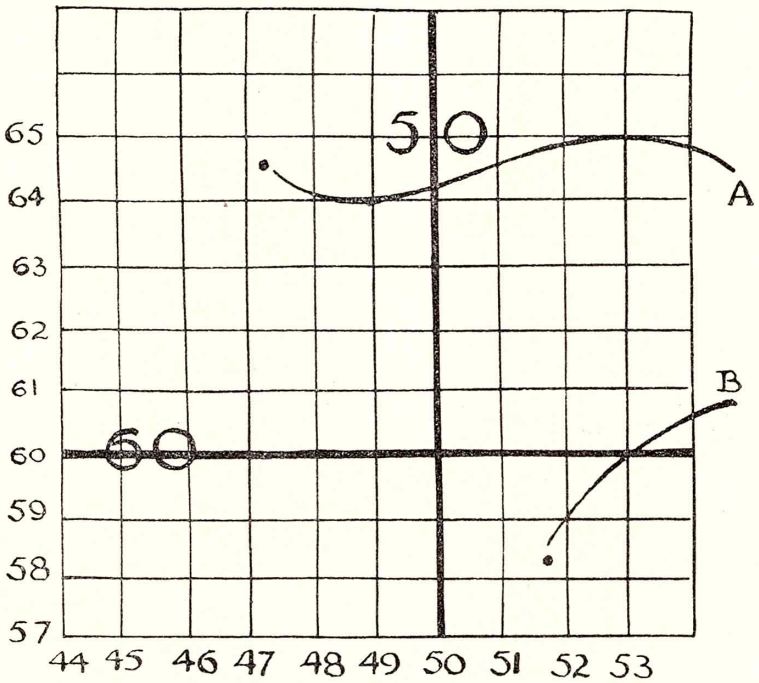


There are three important things to remember:

- **The lines numbered in an Easterly direction are called Eastings.**
- **The lines numbered in a Northerly direction are called Northings.**
- **In every map reference the Eastings are given first.**

Here is an example:

Give the grid reference for point "A".



First, follow the vertical line immediately to the **West** of "A" to the bottom or the top of the map. This is Easting 47.

Now estimate how far across the 1,000 yard square point "A" is. To do this you divide the 1,000 yards square by eye into 10 smaller divisions. "A" is about three of these divisions or tenths across.

This fixes the Easting as 473.

Next follow the horizontal line immediately **South** of "A" to either side of the map. This is Northing 64.

Estimating again, "A" appears to be six-tenths of the way up the 1,000 yard square.

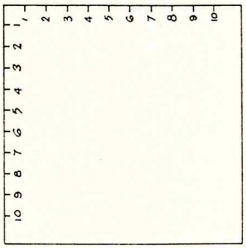
This fixes the Northing as 646.

Write down the reference with the Easting first and you have the reference of point "A" 473646.

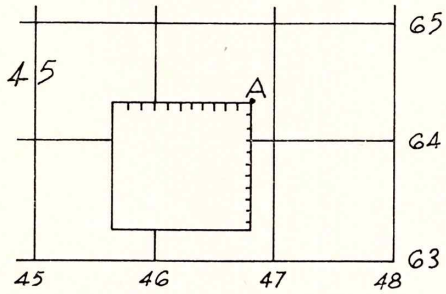
Now work out the position of point "B" for yourself and put a small dot at reference 498615.

USING A ROMER

If you want to be as accurate as you can you should use a romer to determine grid references. A romer is a right angle with sides the length of a 1,000 yard square with the sides marked off in tenths or 100 yards. You can make one up very easily, using the scale at the bottom of the map. Make sure you use the yard scale and **not** the metre one.



A Romer



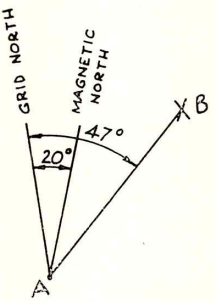
A Romer in use

MAP AND COMPASS

To be able to find our way in country when you have a map of it, you have to use the map and your compass together. To travel between two points on the map, you have to be able to take a bearing from the map and use it as a direction in which to travel.

Bearings

A bearing is a method of telling the direction of the point to which you wish to travel from the point where you are. As you already know, a bearing is the angle between North and the point to which you want to go measured in a clockwise direction. Here's an example:



North

Up till now you have been using your compass and the North point this will give you is **Magnetic North.** That is, the compass needle will point towards the North Magnetic Pole. The North Magnetic Pole is, however, not in the same place as the North Geographic Pole—that is, the northern axis on which the earth rotates. Not only are these two Poles in different positions, but the Magnetic Poles also vary from year to year. On the older topographical maps you will find three Norths. These are:

True North—the actual direction of the North Pole.

Grid North—the direction in which the vertical grid lines—the Northings—point.

Magnetic North—the direction in which the compass needle points.

In the later topographical maps the distinction between True and Grid North is no longer made—there is only about one minute or 1/60th of a degree difference in New Zealand between Grid and True North, and this is so small that you can forget about it.

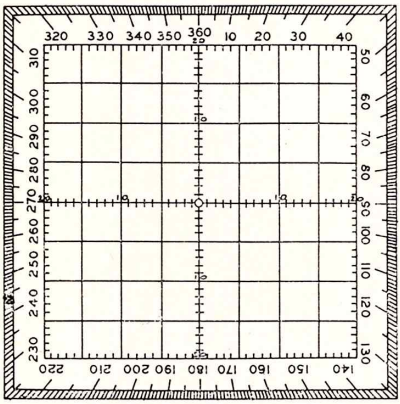
The difference between Grid North and Magnetic North is, however, much more important. Bearings measured from Magnetic North are called **magnetic bearings** and those measured from Grid North are called **grid or map bearings.** Magnetic bearings are what you will measure with your compass and grid bearings are those which you measure from your map.

TAKING A BEARING FROM A MAP

Grid or Map Bearings

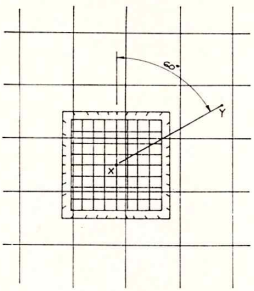
Before Silva compasses were available it used to be necessary to measure the grid bearing with a protractor. It was usual to use what was called a Douglas protractor, and here is how it was done. If you use a compass other than a Silva or other orientating compass you will still have to use this method.

Here's what a Douglas Protractor looks like:



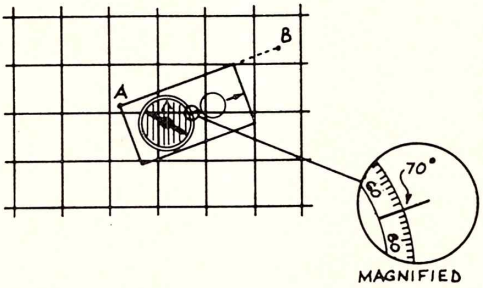
DOUGLAS PROTRACTOR

To measure the grid or map bearing you put the centre of the protractor on the spot from which you want to take the bearing and make sure that the vertical lines on the protractor are parallel to the grid lines. You then read of the bearing from the North point on the protractor in a clockwise direction. Like this:



You can, of course, measure the angle with an ordinary protractor, but it's a little more difficult.

Using a Silva Compass



- Place the compass on the map so that one of the longer sides either joins the two points between which you wish to take a bearing or is on the line joining them.
- Turn the compass housing until the orientating lines are parallel to the grid lines and the N point on the housing points to Grid North.
- Read the bearing off the scale on the compass housing where the end of the direction of travel arrow touches the compass housing.

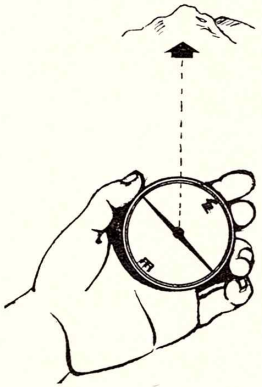
You can ignore the position of the compass needle in reading off bearings from a map.

TAKING A BEARING IN THE FIELD

This will be a magnetic bearing until you correct it for magnetic variation.

Using an Ordinary Compass

- Hold the compass horizontal with the needle pointing both to Magnetic North and the North point on the compass scale.

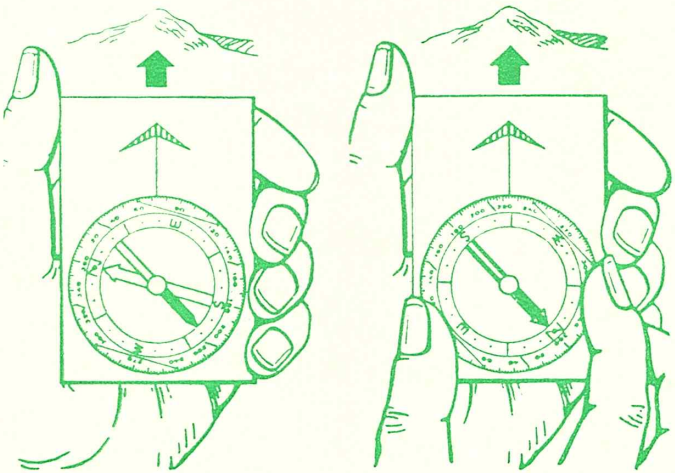


- Read off the bearing by taking a line through the centre of the compass needle at the pivot point to the object.
- Read the bearing in degrees at the edge of the compass scale through which this line passes.

Using a Silva Compass

- Hold the compass horizontal and point the direction of travel arrow at the selected point.
- Keep the compass in this position and turn the compass housing until the orientating arrow lies under the compass needle and the North point on the compass housing corresponds with the red end of the compass needle.
- Read off the magnetic bearing where the end of the direction of travel arrow meets the scale marked on the compass housing.

You should remember when taking a bearing, or whenever you are using a compass, that it can be affected by iron and steel objects such as fencing wire, knives, axes, etc., and these objects should be removed if possible before using the compass.



HOW MAGNETIC VARIATION ALTERS BEARINGS

Remember what was said about Magnetic North and Grid North? They are different because of the effect of magnetic variation. Grid lines are based on lines of longitude and latitude. You will know that these are imaginary lines drawn around the earth at predetermined distances. The lines of longitude run around the earth and intersect at the Geographic Poles. The lines of latitude run around the earth parallel to the Equator. Now because the Geographical and Magnetic Poles are not in the same place, there is a

difference between a grid bearing and a magnetic bearing depending on whether the Magnetic Pole is East or West of the Geographic Pole in relation to your position. In New Zealand the magnetic variation as it is called is always easterly. That is, the Magnetic Pole relative to New Zealand lies East of the Geographical Pole, whose position is represented by the vertical grid lines on the topographical maps.

Now if you take a bearing in the field and wish to compare it with a map, because the Magnetic Pole is East of North, the magnetic bearing will be less than the true bearing. The amount by which it is less will be the magnetic variation of the locality in which the bearing is taken. To get a grid bearing you must **add** the variation to the magnetic bearing.

If you want to work from a map to the field, that is, if you take a bearing from a map of the direction in which you want to go and it is, say, 103° grid, you must **subtract** the amount of the variation from this bearing to get the magnetic bearing. You would travel on a bearing of 103° minus 19.31°, or 83° 29′.

You must remember to correct for magnetic variation because if you do not you can be well off course. In a distance of 3,000 feet if the variation is, say, 15°, you will be about 50 feet off course for every degree of variation. This would be 15 times 50 feet or 750 feet in 3,000 feet. That is about a quarter of a mile for every mile travelled. This isn't good enough for Scouts, so you must remember to make the proper adjustment. No wonder it's sometimes called the Gremlin of variation.

Not only does the variation vary from place to place but it also varies from year to year. You will find this information on your topographical map and the amount of the annual variation used in conjunction with the date on the map will enable you to work out the up-to-date variation.

ORIENTING A MAP WITH A COMPASS

A map is said to be oriented or set when the directions on the map correspond to the directions on the ground as represented on the map.

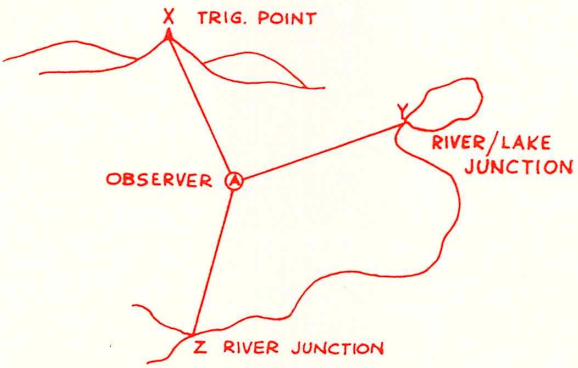
Place the compass on the spread-out map and rotate the map until the needle of the compass points to Magnetic North, as shown on the map. You can also do it by rotating the whole map until the needle of the compass points to Grid North, and then turn the map the amount of the magnetic variation in an anticlockwise direction.

Using a Silva Compass

- Turn the compass housing until the magnetic variation is shown against the end of the direction of travel arrow.
- Put the compass on the map with the direction of travel arrow on a vertical grid line.
- Rotate the map with the compass in this position until the compass needle points to the North mark on the compass housing.

FINDING OUT WHERE YOU ARE

Once you have oriented your map you can, by looking at the country and comparing it with your map, often find out where you are. Where possible you should practise using natural features, hills, streams, etc. The detail on the ground—trees, hedges, buildings, etc.—may easily have been altered since the time the map was made.

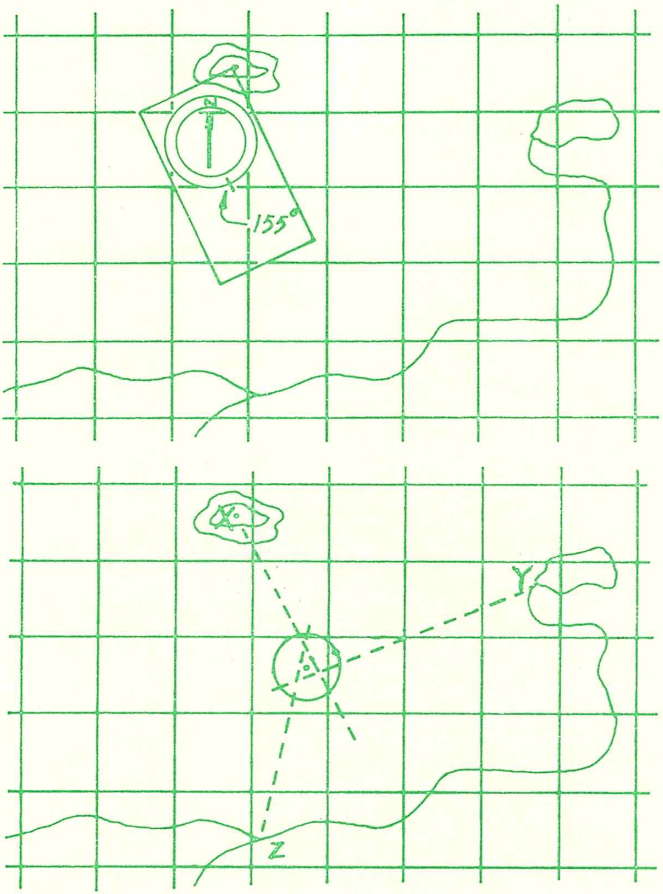


Using a Silva Compass

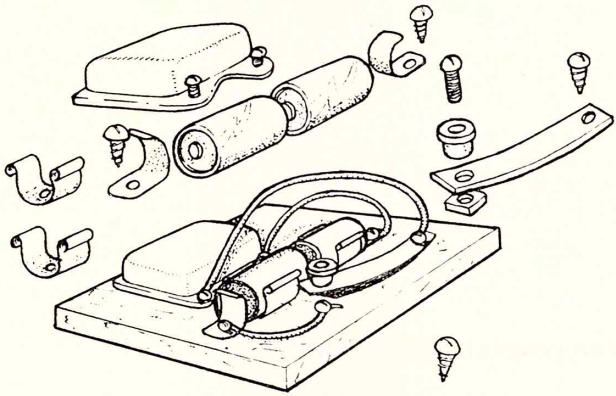
Here is how to find your position on the map with the help of a Silva compass.

- Select three well marked features on the ground which you can easily identify—X, Y, Z.
- Take a bearing on one of them from where you are, e.g. A to X = 315°.
- Adjust this bearing to a grid bearing, i.e. add the magnetic variation. Remember you do this by turning the housing of the compass clockwise. (Magnetic variation = 20°. Grid bearing = 315° + 20° = 335°.)
- Convert this bearing to a back bearing. To do this all you do is to add 180° if the bearing is less than 180° or subtract 180° if the bearing is more than 180°.
- Put this bearing on the compass: 335° minus 180° = 155°. This is the bearing from X **back** to A.
- Place the long edge of the compass on the selected point on the **map** and rotate the whole compass on this pivot point until the orientating lines point to the top of the map and also are parallel to the grid lines.
- Now draw a line along the compass edge.
- Repeat for the other two points.

- For point Y:
  Magnetic bearing, 50°.
  Grid bearing, 50° + 20° = 70°.
  Back bearing, 70° + 180° = 250°.
- For point Z:
  Magnetic bearing, 175°.
  Grid bearing, 175° + 20° = 195°.
  Back bearing, 195° — 180° = 15°.
- You are where the lines intersect.



GETTING A MESSAGE THROUGH



All Scouts need to know how to get a message from one place to another. Read Camp Fire Yarn No. 7 in "Scouting for Boys".

Today you fellows know all about Telstar and V.H.F. radio and all the other modern techniques. Signalling is part of the outdoor adventure of Scouting and you should be able to do this both by day and at night.

Once you learn signalling you are able to send messages across long distances from hilltop to hilltop to another Scout or to another Troop. It will enable you to send for aid quickly and to "be prepared" to assist in any emergency when the normal means of communication breaks down. It's a game which is great fun to play in your Patrol. It takes teamwork to learn and practise and to get a message through.

Learning signalling is not difficult but it does require two things—practice and "stickability". You have to be prepared to keep at it to learn it and then keep up your practice. Signallers are important fellows in any Troop, and good signallers are a great asset to a Patrol.

You have the option of learning either semaphore or Morse. The great advantage of Morse is that you can use it day and night with wireless, flags or lights, whereas semaphore can only be used in the daytime and only with flags. If you learn Morse well you will be able to listen in to Morse on the radio. You should learn both—even the Cubs learn a lot about semaphore.

LEARNING THE MORSE CODE

To do this you will need a buzzer and Morse key. Perhaps your Troop has some, but in any case it's much more fun—and better Scouting—to make one yourself. You can do this by buying a buzzer and making a kit up like this:

The principle of the Morse code is that every letter is made up of dots and dashes, the dashes being always three times as long as a dot. Words are separated by a pause equal to two dashes. Remember that you have to learn to send and to receive. It is a little more difficult to receive than to send, and this is why you should learn the code with a friend so that you can get practice in both sending and receiving.

Here's a piece of information all Scouts should have. Not all the letters of the alphabet are equally used. If we rearrange the letters in their use order, starting at the most used letters we get:

ETAOINS HRDLUCM PFWVYB GJQKXZ

You can use this when you try to decode a code and also as a way to learn the Morse code.

INTERNATIONAL MORSE CODE

LETTERS

A	di-dah	J	di-dah-dah-dah	S	di-di-dit
B	dah-di-di-dit	K	dah-di-dah	T	dah
C	dah-di-dah-dit	L	di-dah-di-dit	U	di-di-dah
D	dah-di-dit	M	dah-dah	V	di-di-di-dah
E	dit	N	dah-dit	W	di-dah-dah
F	di-di-dah-dit	O	dah-dah-dah	X	dah-di-di-dah
G	dah-dah-dit	P	di-dah-dah-dit	Y	dah-di-dah-dah
H	di-di-di-dit	Q	dah-dah-di-dah	Z	dah-dah-di-dit
I	di-dit	R	di-dah-dit		

NUMERALS

1	di-dah-dah-dah-dah	6	dah-di-di-di-dit
2	di-di-dah-dah-dah	7	dah-dah-di-di-dit
3	di-di-di-dah-dah	8	dah-dah-dah-di-dit
4	di-di-di-di-dah	9	dah-dah-dah-dah-dit
5	di-di-di-di-dit	0	dah-dah-dah-dah-dah

Practise the alphabet until you know every letter quickly and without hesitation.

Get into the habit of a smooth, even rhythm. Make short buzzer sounds that'll each sound like a snappy "dit", and sounds three times as long that'll sound like "dah". Make the intervals between "dits" and "dahs" the same length as a "dit", the interval between letters three times as long.

As soon as you know a few letters start practising them, but remember that you have to divide your time between sending and receiving. If you can't do both you aren't a good signaller.

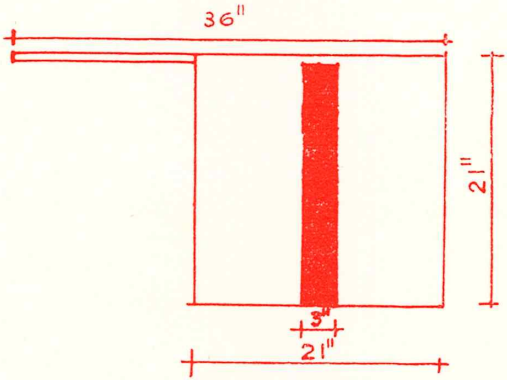
For complete messages, it is not enough to know the Morse code letters—you must also know a few "procedure signals" for getting

a message through. In sending, you use the procedure signals for "attention", "error", "end of words", "end of sentence", "end of message". In receiving you'll have use for the procedure signals for "go ahead", "repeat", "word received", "message received".

When you have learned the Morse code get hold of—or better still make—a heliograph and send your code by sunlight. You can use a torch or a car horn or a flag.

MORSE FLAG

Make yourself a Morse flag—get Mum to show you how to use the machine. You want a 21 inch square of white material with a 3 inch wide blue strip across the centre. Tack the flag onto a piece of $\frac{3}{4}$ inch dowelling 3 feet long.



Another useful flag is divided diagonally red and yellow the same size for use against a light or sky background.

FLAG DRILL—1

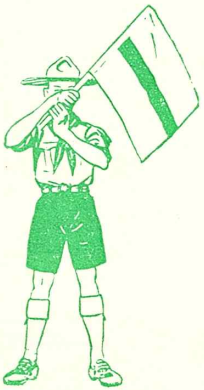
Here's how you send:

PREPARE TO
SIGNAL POSITION:

Stand comfortably with feet apart, weight on soles of feet, body slightly forward, flag gathered in left hand.

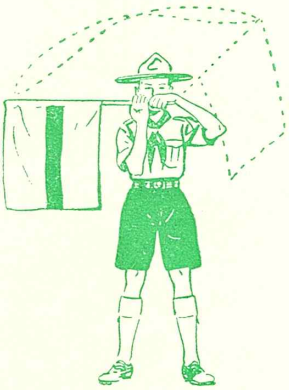
READY TO
SIGNAL POSITION:

Right hand should always be above left. Keep hands in front of face level with nose. Elbows away from side of body. Look straight ahead—not at flags.



FLAG DRILL—2

DOT



DASH

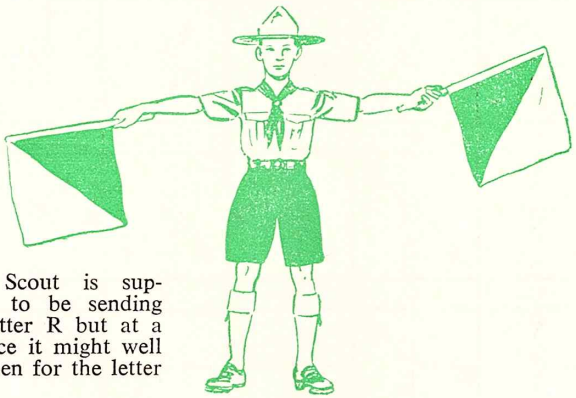
The movements should be made with wrists only; the arms and body, although not held rigid, should not come into play. To keep the flag unfurled, move it in such a way that the front of the stick describes a figure of eight. The above illustrations explain this clearly.

SEMAPHORE

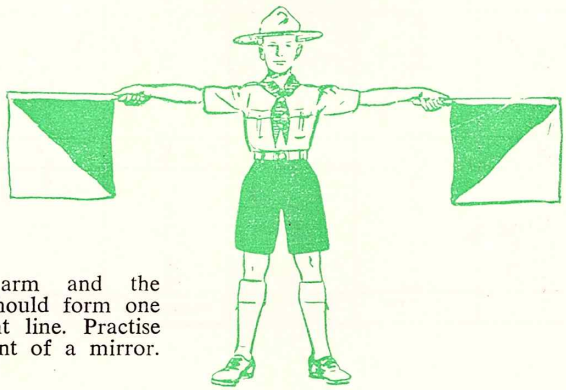
Semaphore signalling may not seem quite as modern or up-to-date as Morse but it does have some advantages—you don't need any equipment to use it. You can use it more quickly and it is very useful in wide games.

The first important thing about learning Semaphore is to make sure you hold the flags correctly so that they are rigid extensions of your arms. In this way you can then get the angles right, and getting the angles right is the basis of Semaphore. Here are two examples to show you how this is done:

WATCH YOUR ANGLES!

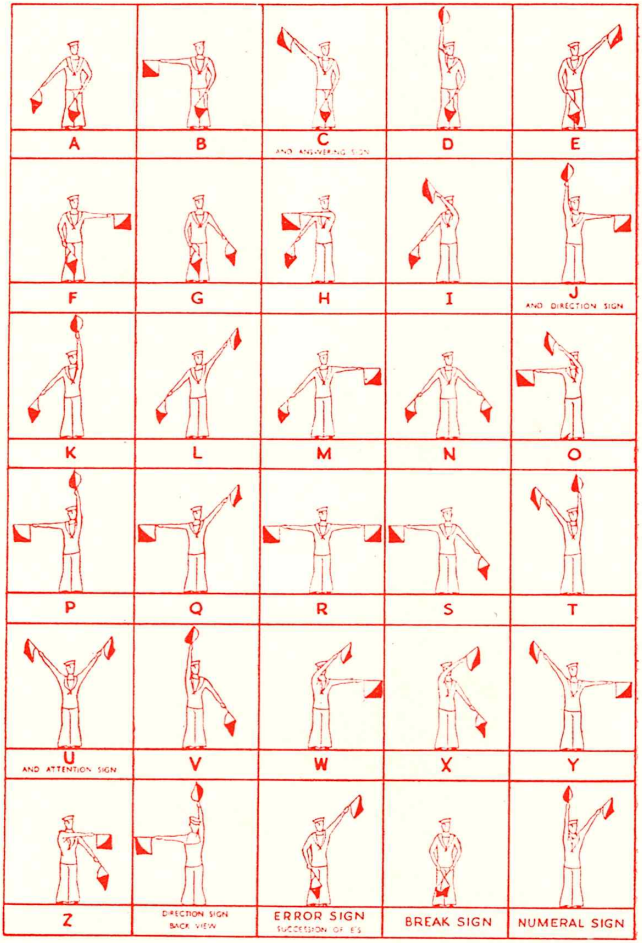


This Scout is supposed to be sending the letter R but at a distance it might well be taken for the letter L.



The arm and the flag should form one straight line. Practise in front of a mirror.

SEMAPHORE ALPHABET



Remember, stand erect with your legs comfortably apart and **exactly** facing the person to whom you are signalling.

Small flags are best—about 15 inches square and divided diagonally in two colours—red and yellow are best.

Here is the semaphore alphabet arranged so that it is easy to learn:

1st Circle—A to G.
A, B, and C are sent with the right arm only.
D with either arm.
E, F and G with the left arm only.

2nd Circle—H to N—omitting J.
Remember that J is left out while you are learning this circle. For this circle hold the right arm in the position for sending A. Only the left arm moves.

3rd Circle—O to S.
For this circle the right arm is held in the position for the letter B. Only the left arm moves.

4th Circle—T, U, Y.
For this circle the right arm is held in the position for the letter C. Only the left arm moves.

5th Circle—Numerical sign, Alphabetical or J and V.
For this circle the right arm is held in the position for the letter D. Only the left arm moves.

6th Circle—W and X.
For this circle the **left** arm is held in the position for the letter E and only the right hand moves.

7th Circle—Z.

1. When forming the letters where both flags are on the same side of your body such as I, O, X, etc., turn your body from the hips, but keep the head and eyes straight to the front. The flags must be kept one above the other.
2. When double letters occur, the flags are brought back to the "ready" position between the letters.
3. When making letters that require one arm only, keep the flags still, the stick pressed hard against your legs.

SIGNALLING PROCEDURE

Semaphore

The procedure for sending a signal is very simple. The **sender** makes the attention signal "U" and to attract attention the flags can be waved up and down if not acknowledged immediately. The **receiver** makes "K" (ready to receive) and the sender makes "J", the direction signal to indicate the direction he is facing, as Semaphore can be sent to a receiver on either side of the sender provided the receiver knows in which direction the sender is facing. At the start of the message the **sender** makes BT, meaning a long break, and then starts the text of the message. The **receiver** acknowledges each word understood with the letter "C". When the message is complete the **sender** makes BT; then if no answer is required he signs off with AR, which is acknowledged by the **receiver** with "R".

Here is an example:

Sender	*Receiver*
ATTENTION	K
J	C
BT	C
INVESTIGATE	C
SMALL	C
BOAT	C
ADRIFT	C
ONE	C
MILE	C
EAST	C
KAU	C
POINT	C
BT	C
AR	R

Special Signs

Spell all numbers in full.

K sent at the end of a message indicates that the sender requires an answer. It would be sent in place of AR and is still acknowledged by the receiver with R.

AAA signifies a full stop.

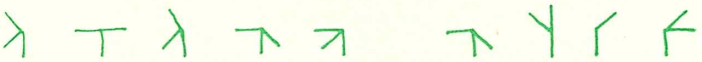
IMI means repeat.

A succession of E's means erase.

Morse

Procedure is similar to that for Semaphore except when a person wishes to call up an unknown receiver, such as an unknown ship, the sender sends AA AA AA, acknowledged by the receiver with K. The message is then transmitted as for Semaphore. Each word or group received is acknowledged with a dash. If a signal is being sent to be read by all stations the call will be sent in a succession of 2's—2 2 2 2. The special signs used for Semaphore are also used for the Morse Code.

Now all you need is practice. Use your signalling all you can, don't forget that you can write both Semaphore and Morse. To write Semaphore use stick men with flags like this:



and you can write Morse like this:

Now think up some ways of your own to write them—there are some.

EMERGENCY SIGNALLING CODE

As well as knowing Morse and Semaphore you should know these signals before you go on your journey. It's most unlikely that you will need them but you had better "be prepared".

These are the internationally approved code of symbols and are used in Search and Rescue procedures:

MESSAGE	CODE SYMBOL
1. REQUIRE DOCTOR. SERIOUS INJURIES.	
2. REQUIRE MEDICAL SUPPLIES.	
3. UNABLE TO PROCEED.	
4. REQUIRE FOOD AND WATER.	
5. REQUIRE MAP AND COMPASS.	
6. REQUIRE RADIO.	
7. INDICATE DIRECTION TO PROCEED.	
8. AM PROCEEDING IN THIS DIRECTION.	
9. AIRCRAFT SERIOUSLY DAMAGED.	
10. PROBABLY SAFE TO LAND HERE.	
11. REQUIRE FUEL.	
12. ALL WELL.	
13. NO.	
14. YES.	
15. NOT UNDERSTOOD.	
16. OPERATION IS ENDED. RETURN TO YOUR BASE.	
17. WE HAVE FOUND ALL PERSONNEL.	
18. WE HAVE FOUND ONLY SOME PERSONNEL.	
19. WE ARE NOT ABLE TO CONTINUE RETURNING TO BASE.	
20. HAVE DIVIDED INTO TWO GROUPS. EACH PROCEEDING IN DIRECTION INDICATED.	
21. INFORMATION RECEIVED THAT OBJECTIVE OF AIRCRAFT IS IN THIS DIRECTION.	
22. NOTHING FOUND WILL CONTINUE SEARCH.	
23. REQUIRE ADDITIONAL MANPOWER.	
24. IF IN DOUBT IN AN EMERGENCY, USE INTERNATIONAL SYMBOL.	SOS

How to use the Ground to Air Signals

1. Find, or if necessary clear, a piece of ground on which to lay the signals. An area 60 feet by 30 feet is desirable, where possible the perimeter outlined with materials used for signalling.
2. Lay out the signalling symbol by using strips of fabric, pieces of wood, stones, paper strips, reversed ponga fronds, or other suitable material. On snow, signals can be made by dragging, shovelling or tramping in the snow or by the use of a stainer such as Condy's crystals. Symbols so formed will appear black from the air.
3. Symbols should be at least eight feet in length—longer if possible. They should be laid out exactly as depicted or confusion as to meaning may occur.
4. As great a colour contrast as possible should be aimed for between the material used and the background against which it is exposed.
5. Attract the attention of aircraft by using smoke signals, flares, mirrors movement or other available means.

Acknowledgment from Aircraft to Ground Parties

An aircraft will indicate that ground signals have been seen by:
(a) Rocking from side to side, or
(b) Green flashes on signalling lamp.
An aircraft will indicate that ground signals are **not** understood by:
(a) Making a complete right hand circuit.
(b) Red flashes on signalling lamp.

Code for Ground Use

Distress signal: Three evenly spaced signals given in one half minute—that is, 15 seconds apart—repeat if necessary at intervals of five minutes.

Acknowledgment: Two signals given in quick succession, and repeated after an interval of two minutes.

Recall signal: Four evenly spaced signals in a minute—that is, 20 seconds apart. This signal will be repeated several times at five-minute intervals.

Signals may be given as shouts, whistles, rifle shots, torch flashes, waving of cloth or by blanketing a smoky fire.

The chief characteristic of emergency signals is their **regularity; any** signal repeated at regular intervals should be investigated.

As a Scout, you will understand that these signals are not things to play with, and they should only be used when an emergency arises.

THINGS TO DO:

1. Get a copy of "Safety in the Mountains" and read it.
2. Get a copy of "How to Survive in the Bush, on the Coast, in the Mountains of New Zealand", and read it. Note that the signals given on page 26 have been altered to those given above since the book was published.
3. Keep these books in your pack.

observation

Observation is the greatest Scout skill and you must start to acquire the power of observation as soon as you can.

An observant chap will see how the New Zealand Ensign is folded for breaking without being told. He will be able to tell which way up to fly the Union Jack just by looking and seeing how it is done. This is more than looking or seeing, it is looking with eyes trained to tell you how and why, and you will want to use all your other senses—smell, touch, taste and hearing also. When you are called to the alert you don't just put your body into the right position. A Scout at the alert has all his senses ready. The astronauts would say he was in "GO-GO" condition, ready for firing—ready to meet all the challenges that come along. You won't get into this alert state of mind just by wishing—you've got to do something about it.

Some fellows walk along a road or through a field and don't see anything. They have eyes and ears but they don't see or hear and, just as important, they don't remember what they've seen as they go along. They just don't concentrate.

A Scout, on the other hand, has his eyes and ears open. He is looking for the things he has been told about and for anything new to him. If he sees a tree he wants to know what sort it is. If he hears a bird call he just doesn't say its a bird—he will want to know what sort of bird it is. Where does it live? What are its habits? Where does it nest?

The place to start is to start looking at everything—What's your car number? What colour are Skip's eyes? What colour is your P.L.'s hair? You keep trying to be observant. In a little book he wrote before he wrote "Scouting for Boys", B.P. said:

> **"It should be a point of honour with a Scout that nobody sees any object that he has not already seen for himself. For this your eyes must be never resting, continually glancing round in every direction, and trained to see objects in the far distance. A Scout must have eyes in the back of his head."**

Practise looking at things all you can, and don't be satisfied if you can say you saw a jet prop aircraft.

Did it have four engines or two? Was it a high wing or a low wing? Was it N.A.C. or Air New Zealand or even R.N.Z.A.F.? What direction was it flying in? How far away was it? How high was it flying? You see, you can find out quite a lot about it just by

seeing it. You should remember that if you train yourself to be as observant as this you might be of great assistance if the aircraft went missing.

Try this when you're on a Patrol hike. Before you go, look at the map of the area. This will tell you some of the things you will see. The railway line, the lighthouse, the church, the school, the farm houses, the river, and a host of other things. But what it won't tell you and what you must observe for yourself are: What colour they are? What are their names? Who owns them? Make up your own list. As well as this, run a competition. List a few things such as possum track, sheep track, fantail, a karaka tree, a rabbit, and see who can fill the list in first. As you go you could look out for places for a Patrol camp or a Cub outing. You'll be so busy you'll start and wonder how anybody is bored walking along. Practise as you walk to school or Scouts. Keep your eyes open to all the alterations going on on your way: Has a house been painted? Is there a new garage? Has someone got a new car? Once you start really looking you won't be lonely or bored.

Once you get used to seeing, you can then start to play the game of deduction. Have you ever read Sherlock Holmes or seen him on TV? If you have, you'll remember that he was very observant. He had trained himself to see all the signs at the scene of the crime. But he took it much further. He made deductions from these signs. This is really putting all the things you see together and imagining how they occurred. Read Campfire Yarns 11, 12, and 13 in "Scouting for Boys". There is a host of ideas for you in these yarns. Try some. Send a couple of your Patrol ahead of you and have them do something that will leave a series of signs like peeling an orange, sitting down, walking barefooted for some way. Then follow with the rest of the Patrol, and when you meet them tell them what you think they have done. If you are wrong, go back with them and have them act it out again.

Being able to read signs and make correct deductions are two of the most important things you can learn to do as a Scout.

Just think how important they are. Could you give first aid without them? Could you read Morse or Semaphore or break a code? Of course you couldn't, and indeed you'll take a long time to be a good camper if you can't look at what the experienced chap does and deduce his reasons for doing it. Practice will help you learn to tie a knot quickly, but observation will teach you **how** to tie them.

TRAILING

A Scout trail is a trail made up of Scout signs and is the first kind of trail you have to learn to follow. Signs are made on the ground, close to the right-hand side of the road. They should never be made where they will damage or disfigure private property. Here are the signs given in Camp Fire Yarn No. 4. To pass your Third Tenderfoot Test you must know these signs.

Road to be followed.

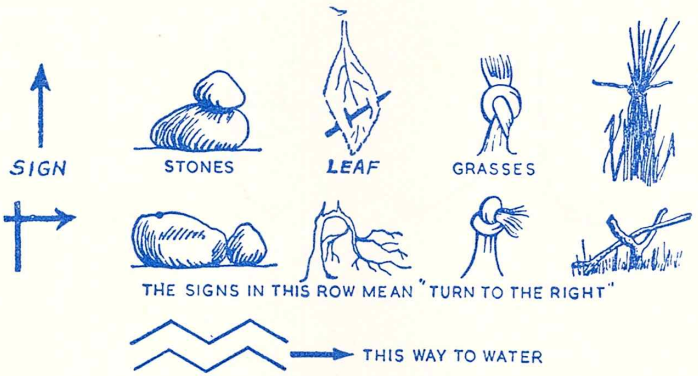
Letter hidden three paces from here in the direction of the arrow.

This path not to be followed.

"I have gone home."

(Signed) Patrol Second of the Kotare Patrol, Belmont Troop.

Here are some variations:



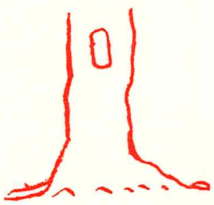
Your Patrol will probably have some "secret" signs of its own—make sure you learn them. Here's one:

Wait for me.

As you get more experienced in seeing the signs, they can be made smaller and smaller. Don't always put them on the ground; put them on trees, but no higher than your knee, and you must practise both laying a trail and following it. You will have to follow a trail half a mile long containing at least 30 woodcraft signs in 25 minutes for your Second Class, and practice is the only way that will help you do it. Remember, go slowly, be sure that each sign is a sign and not an imagined one. Don't just think the trail will follow the direction you expect. Look up and around, and down as well.

BLAZES

Blazing is another way of marking a track. A blaze is a scar left on a tree trunk by removing a thin slice of bark with an axe or slasher. Sometimes the blazes are made side on to the track, but the majority are marked by fore and aft blazes. Blazes should not be used on valuable trees, and you should never use them if some other mark can be used. If you go along well kept tracks you will often see that the route is marked by coloured tin discs tacked on the trees. The practice is to put one blaze away from your base and two blazes on the other side of the tree to show the way back to your camp. Don't forget a Scout never marks any tree for fun, and you should avoid blazing a trail if you can.



One blaze:
Away from base.

Two blazes:
Towards base.

Don't use these, they injure the tree. This is what they look like. Blazing tree trunks opens the way for fungus and insects to get into the matured wood. This often means the death of a fine tree.

KIM'S GAME

This is a game you play to improve your observation. It's an alternative requirement to following a trail in your Second Class Test, but you'll want to pass them both. Read Camp Fire Yarn No. 1 again because it will show you how you can train yourself in observation. The important thing is to give all your attention to the problem in hand. In Kim's Game it's the problem of remembering 24 different articles. For a pass, you've only got to remember 16, but 24 is much better!

The articles must be well assorted and at first you will find it hard, but you get better very quickly with practice. Here again it's easier to learn with another fellow from your Patrol. Get 24 well assorted articles for each other and practise looking for a minute and then seeing how many you can write down. At first you will just give the name of the article, such as : key, fountain pen, socks, knife, match, etc. As you get better, raise your sights and give a better description of each article: Yale lock; morticelock key on a

ring; lever filling fountain pen with silver top; green socks—darn in heel; pocket knife—two blades, corkscrew and spike; used wooden match—burned about one-third of length. Get the idea?

You will find it helpful if you learn to group the articles according to their colour, their shape, or the material of which they are made. There might be a lot of long, thin articles or several things with a sharp point, or connected with a certain type of person.

THINGS TO DO

- Practise using hearing only—how many common sounds can you identify? Or by smell alone, or by touch only.
- Imagine someone from your house is missing. Write a missing person description of them.
- Practise with playing cards—deal half a dozen face up, look at them for a minute, and turn them over and try to remember them. Keep on practising until you can do 20 or 30 of them.
- Try some other variations of Kim's Game.

Whatever you do, practise Kim's Game. Your Scouter will use it often and you can't let your Patrol down, can you?

estimation

The ability to estimate heights, distances and widths is a very useful ability for a Scout to acquire. It is needed for pioneering, making a rough sketch map, and even for camping.

ESTIMATION IS NOT GUESSING

When you estimate a distance or height, you have to do two things. First you have to attempt to work out the distance just by looking at it, or **inspecting** it. Then you measure it, if you can, using such ready measurements as your pace, your personal measurement or the various methods for estimating distances and heights.

KNOW YOUR PACE

The first essential is to know the length of your normal pace. The best way to do this is to measure as accurately as possible, say, 100 yards. Then pace this measured distance about twice in each direction, each time counting the number of paces. Average the number of paces for the distance, then calculate the length of your pace by arithmetic. It is important to remember, when pacing the distance, to use your ordinary walking pace, and to pace on level ground. You should also know how your pace alters going uphill or downhill.

PERSONAL MEASUREMENTS

The next step is to work out your own personal measurements chart, which will be most useful for short distances, or from which you can mark up a suitable measuring rod without the need for a ruler.

With a tape measure or a ruler, measure these distances and enter them on a piece of card. Draw the card up like the sample shown opposite. It is also useful if you can find a particular measurement on yourself which is exactly one inch long (the length between two particular creases on the joints of one your fingers will do).

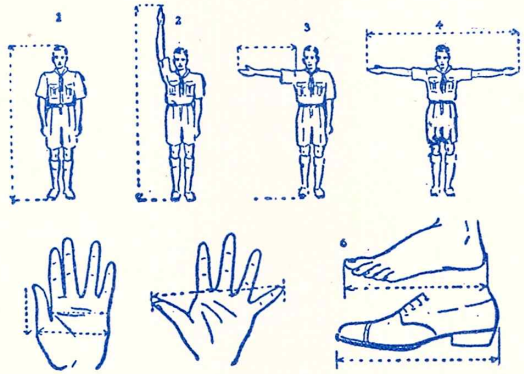
ESTIMATING DISTANCES

There are certain well known distances which every one of you often sees and which can be readily recognised—these are the length of a cricket pitch, tennis court, football field or swimming pool. These can be a great help in estimating distances.

However, the accurate estimation of distances is all a matter of practice. It is something you can do on your own as you walk along a street as well as when you are out with your Patrol.

PERSONAL MEASUREMENT CHART—

These will alter as you grow so check fairly frequently.



FILL in your measurements—

Height (1) .....

Height to tip of extended hand (2) .....

Length of arm, armpit to tip of finger (3) .....

Extended arms, finger-tip to finger-tip (4) .....

Breadth of palm of hand .....

Span of hand, thumb to small finger .....

Length of bare foot .....

Length of boot .....

Elbow to tip of forefinger (cubit) .....

Length of pace on level ground .....

If you can find a similar measurement for one foot, this would also be useful. Remember that you will probably still be growing so check on your measurements regularly.

Choose a point a reasonable distance away. Estimate the distance as accurately as you can, then check your estimate by pacing the distance. Repeat this exercise again, for all distances from 25 yards to a couple of hundred yards.

There are several aids to estimating distances. Imagine the distance divided into half, estimate the first half, then double it. Or if you know such a length as 100 yards, divide the distance into lengths of 100 yards.

FINER POINTS IN ESTIMATING

After you have practised estimating and measuring distances, a number of interesting things will become apparent to you. An object will appear to be at varying distances according to whether the sun is shining behind it or behind the observer or whether the weather is overcast. Backgrounds affect estimation, so does the slope or nature of the intervening ground.

Distances are overestimated when lying or kneeling, when background and objects are of similar colour, over broken country, when looking over a valley or undulating ground in avenues, long streets or ravines, when the object is in the shade, in mist or failing light, when heat is rising from the ground, or when the object is only partly seen.

Distances are underestimated when the sun is shining behind the observer, in clear atmosphere, or on a bright sunny day, after a heavy shower, when the background and the object are of different colours, when the ground is level, when looking over water or a deep chasm, when looking upward or downward, or when the object is large compared with its surroundings.

ESTIMATING DISTANCE BY SOUND

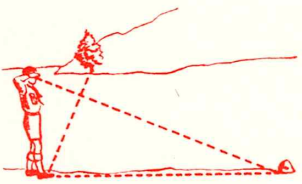
Light travels almost instantaneously, whereas sound travels at the rate of 365 yards per second. By counting the seconds from the time you see an action to the time you hear it, you can estimate the distance by multiplying the number of seconds elapsed by 365 yards. Use it for lightning, chopping, etc. You can even use an echo for the same purpose. Remember to divide the time by two as it has had to go there and back.

MEASURING DISTANCE ACROSS A RIVER

There are two easy ways of doing this, but both need practice for accurate results.

The Napoleon Method

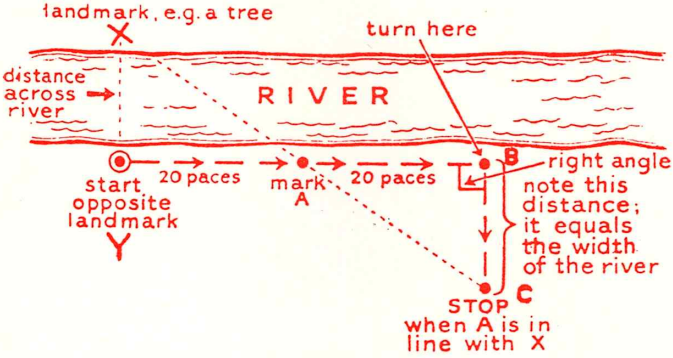
Stand on one shore. Place a flat hand against your eyebrows, palm down. Slant the hand until its outer edge seems to touch the opposite shore. Turn 90°, transferring the distance across the river to your side of the river. The distance to the point on your side of the river which the edge of your hand now seems to touch is the width of the river.



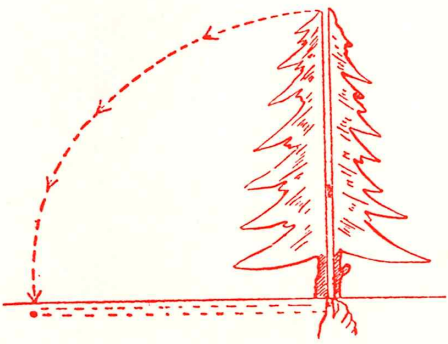
A More Accurate Method

This requires a lot of open space on your side of the river. Select a landmark such as a tree on the water's edge on the opposite bank of the river at a spot where the river's course is fairly straight. We call this spot "X". Now place a stone or a peg at a point "Y" exactly opposite it. Pace out 20 paces at right angles to the line

X Y and put a peg or a stone at this point "A". Pace out a further 20 paces in the same line. Put a peg or a stone at this point "B". Turn and walk at right angles to the line Y B and stop when the points "X" and "A" are in line. This is point "C". The width of the river is equal to the distance B C.



ESTIMATING HEIGHTS

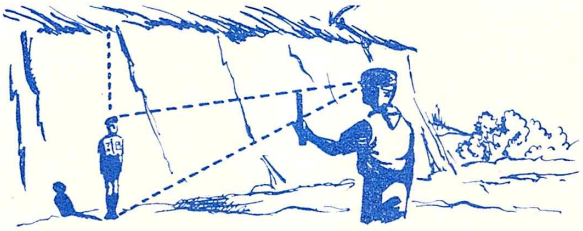


There are a number of methods of estimating heights, and it is good practice to measure each height by at least two methods. Note that the slope of the ground may affect your results, so that it is better to check your answer from two positions and take the average.

Here are three methods to try:

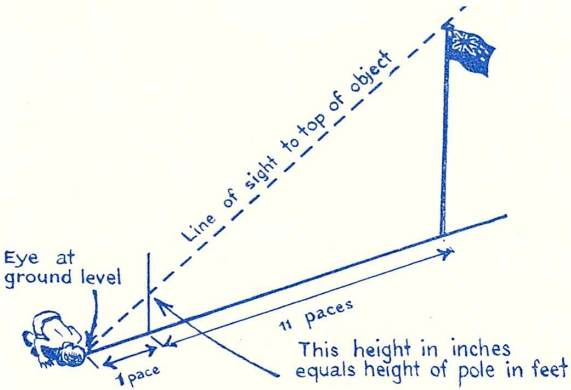
Lumberman's Method

Stand well away from the object and hold a twig at arm's length from your body. Arrange the twig so that its tip is in line with the top of the tree being measured, and move your thumb up or down until it is in line with the base. Now swing the twig through a right angle, keeping your arm steady, so that your thumb remains level with the base of the object. Observe the point on the ground at right angles to the tree where the tip of the twig now appears to rest. The approximate height of the object can be measured by pacing the distance from the base of the object to this point.



Artist's Method

At the base of the object place an article (such as a staff or a person) of known height. Stand well away from the object, then holding a pencil or twig at arm's length, arrange for the tip of the pencil to be in line with the top of the staff or person and the thumb to mark the ground level. Next estimate how many times this distance will go into the height of the object and multiply by the height of the article.



One in Twelve Method

This is a very accurate method. From the base of the object a distance of eleven units is marked off. The unit may be of any convenient length—the length of a staff, or even two or three staff lengths—but best results are obtained when the twelve units' distance approximates the height of the object. At the eleventh unit mark the spot, then take a further unit, making twelve in all. The staff is then held vertically (most important) at the eleventh mark. From a fixed eye position near the ground, sight both top and bottom of object. Mark points where line of sight cuts the staff. Distance between these marks in inches represents height of object in feet.

ESTIMATING NUMBERS

Sometimes you may wish to estimate the number of things you see—the number of sheep in a paddock or the number of people at a football match or in the playground—and some simple tips will help you to do this. Some musterers on a sheep farm count the sheep in lots of five or some number of sheep which they have found they can see quickly, so that instead of trying to count each sheep in a paddock they look over the paddock and count how many units of five sheep they can see. Then if they multiply this number by five, they know how many sheep are in the paddock. Similarly, they use the same way of counting sheep going through a race. If you practise you will find it is surprisingly easy to see a group of a constant size in a crowd of people or a flock of sheep. If people are sitting down at a football match, try and count them by dividing the block of them you are looking at into, say, 20 equal areas—then count the number of people in one or two of these areas and use this as an average for the rest of the areas. If you have counted 120 in one area and 110 in another the average is 115, and this multiplied by the 20 areas you divided the crowd into will give you a total of 2,300 people.

THINGS TO DO

Practise all sorts of estimation as often as you can.

Don't forget to check your pace and personal measurements frequently as you'll be growing pretty fast.

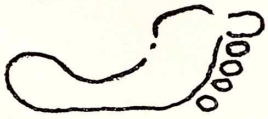
TRACKING

Now that you know a little about following a trail and have improved your powers of observation, you are ready for a far more exciting activity—tracking.

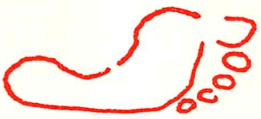
The big difference between following a trail and tracking is that you must recognise signs which have not been left especially for you to see.

Ever since the first Maori went into the New Zealand bush, tracks have been formed. Some of the maps which you may have may show Maori tracks, and when you are a Venturer you may want to follow them. These tracks were made by the feet of the people who walked along them. Lately tracks have been made in our bush by the introduced animals which have been liberated, like deer and opossum, or by escaped animals, like pigs and goats. While these tracks are easy to follow, the tracks made by one man or one animal are much more difficult and to follow these will call for all your concentration and observation.

Have you ever noticed the print left by your bare foot on the sand or on the bathroom floor. If you have you will know it looks something like this:



The P.L.'s footprint may look like this:

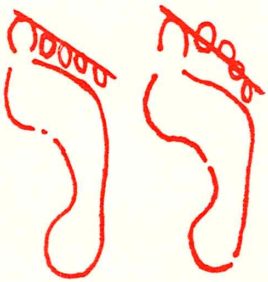


Did you know that everybody's feet are a slightly different shape and the prints they leave are as individual as your fingerprints? When you are out on a hike and come across a stretch of smooth sand, or perhaps a ploughed field, get your Patrol to take off their boots and walk barefooted over the ground. If you use a piece of ploughed field, make sure the farmer has given you permission as you would not want to disturb any seeds he has planted. Now try and see the differences in the footprints and then learn to put names to them.

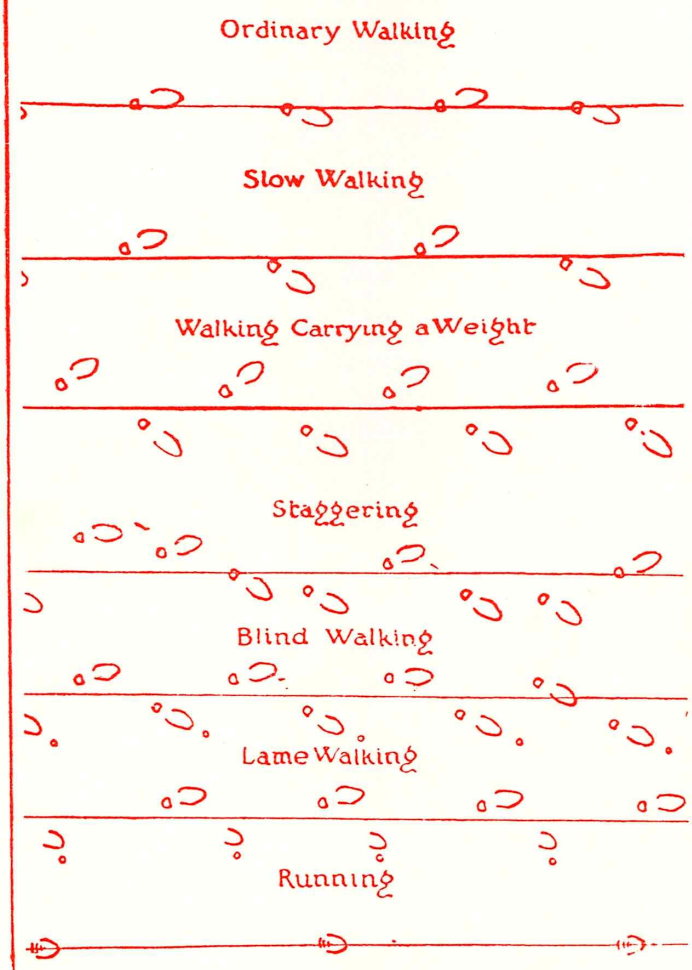
If you learn to recognise all the footprints of your Patrol, you will be able to follow them quite easily and you may be able to use this ability in a wide game.

As well as looking at the shape of the footprints, look at a series of them made by the same person. Notice whether the toes are pointed outwards or inwards. Does the heel reach the ground before the toes. If it does the heel mark will be deeper than the toe mark. See what difference running and walking makes to the footprints. Walk along carrying a load on your back—piggyback a smaller boy. What happens to your footprints? It's a good idea to have a notebook and make sketches of the various footprints as you see them. Here's a way B.P. suggested you could tell the difference between footprints.

Draw a line from the tip of the big toe to tip of the little toe, then notice how the other toes lie.



THE GAITS OF MAN



Now put your shoes on and walk over the sand. They're not all the same, are they? Some will be bigger or wider than others. Some will have a pattern on the sole which will leave a distinctive track. Try running, walking slowly, and carrying a load. What differences are there in the footprints? Try blind walking and staggering until you can recognise the difference. Get Dad and Mum to do it when your family is next on the beach. Don't forget your young brother and sister, too.

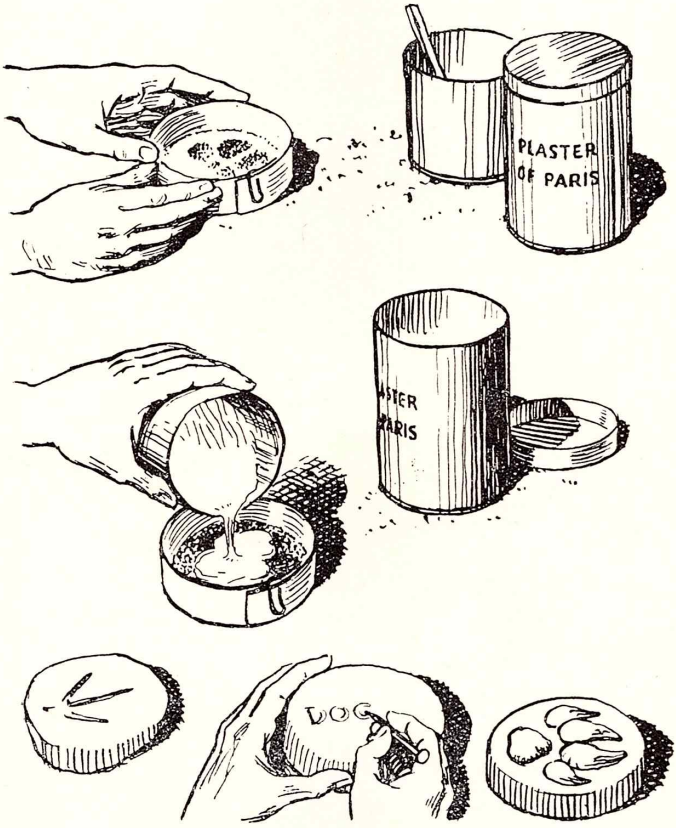
The next step is to apply what you have taught yourself. Look at footprints whenever you see them and try to determine who made them. Was he carrying a load? Was he running? and so on. Try and judge when they were made. If it rained after the marks were made, what difference does it make to them? If it has been windy after they were made, loose rubbish or leaves may have been blown over them.

Watch for tyre marks and learn to recognise the brand from the tread marks. It's all good practice.

Once you have learned the tracks of man, try the animals—start perhaps with your cat or dog—watch what happens when they run or jump. When you are on a hike look for the tracks of sheep, cattle, deer, pigs, hedgehogs, opossum, etc. It's a good idea to make a plaster cast of them so that you can see what they look like. Here's how to do it:

- Select a print on level ground and put a paper collar around it. This collar can be held together with a piece of selotape.
- Mix some good quality plaster of paris—dental plaster is best—with water to the consistency of thick cream.
- Add the plaster to the water to ensure an even mixture.
- Pour evenly into the print, starting from one side to avoid air bubbles.
- Put in a strip of cotton gauze or wool or teased out sisal to reinforce the cast.
- When almost dry, scratch the date and the type of track, etc., on the back of the cast.
- The mixture will take about twenty minutes to set properly. Remove it carefully and wash off any loose soil.

You will see that this is a positive impression—it will be the same as the foot that made the track you saw. It is possible to make a further cast from this which will show what the track looks like. This is over to you. You don't want to be told everything, do you?


PLASTER
OF PARIS
DOG

TRACKING

Now you've learnt to recognise the various tracks, you'll want to know how to follow a track. Here's how to do it.

- Look at the tracks into the sun if possible.
- Sketch and memorise one single print.
- Get an all-over view of the track.
- Think with the mind of the animal, bird or person you are following.
- When a track is lost, mark the spot, and cast around in a wide circle.
- Take your landmarks when you start and look back from time to time as you go along.
- If you are tracking an animal, keep down wind of your quarry if possible.

Look at the tracks into the sun if possible. If you can look at a track against the sunlight the shadows will accentuate the outline of any print. If the sun is behind you, you may miss some important details of the track.

Sketch and memorise a single print. It's not much use trying to follow a track if you don't know exactly what sort of track you are looking for.

Get an all-over view of the track. Know what the pattern of the track is—if you are following a deer track, remember it makes four footprints for each "step". Study this set of four prints, it will help you pick up the track more easily.

Think with the mind of the animal, bird or person you are following. If you are tracking a deer, keep thinking, "Where would I have gone if I were a deer running along this track?" The more you know of the habits of the animal you are tracking the more easily you will follow its track. Read Campfire Yarn No. 12 again. **When the track is lost, mark the spot, and cast around in a wide circle.**

If you tramp around without thinking you may well obliterate the track you are looking for. If you are with your Patrol the P.L. will get your best tracker to go out perhaps 10 or 20 paces and circle around you looking for the track. The rest of the Patrol will not move about. If you are by yourself, mark the spot in some way and look around in this manner yourself.

Take your landmarks when you start and look back from time to time as you go along. It's not much good following a track if you get lost in the process, is it? This is another example of how you should be thinking about all your Scout training all the time. You might even use a map and compass, or just a compass, at the same time as you are practising tracking.

If you are tracking an animal, keep down wind of your quarry. If you want to see the deer you are tracking you should try to keep down wind of it. Of course, the track may not let you do this, but if you think you are getting close to it, circle about as B.P. tells you in Campfire Yarn No. 12.

STALKING

This gets us to the point of talking about the most exciting game of all—stalking. This is where all your knowledge of tracking, observation, map and compass comes into play. Stalking is the ability to travel through the bush and fields without being seen or heard. This is the hallmark of the real Scout and you will have to practise a long time to be very good at it. The adventure is worth it. You don't have to be hunting an animal to enjoy stalking it.

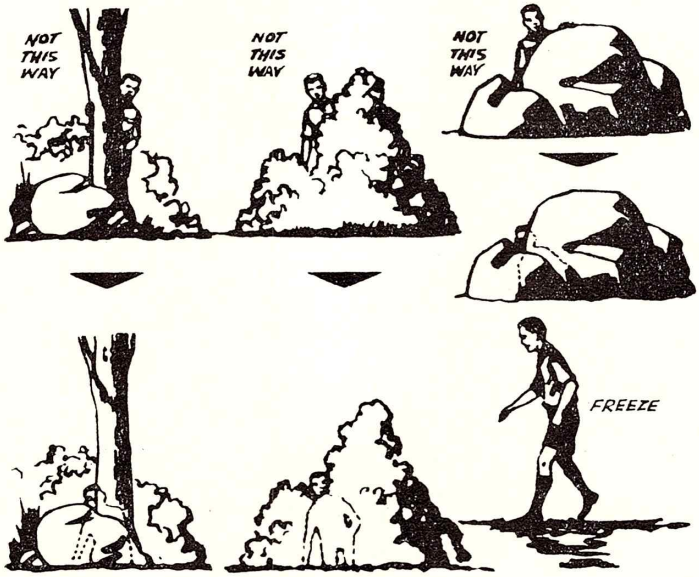
As you will know, animals depend upon their keen sense of smell and hearing for their protection. What they see is mainly movement; this means that one of the first things you must learn is to "freeze". If an animal sees you "freeze" on the spot—that is, become absolutely motionless—if you keep **perfectly still** the animal may look straight at you without noticing you and go on browsing. Watch your cat stalk a bird and you'll see what to do.

Always test the wind to discover its direction. Let a few blades of grass fall from your hand and see in which direction they blow. If the wind is too soft to blow the grass, wet your finger and hold it up, it will feel colder on the side from which the wind is blowing. Move around until the wind is blowing from the animal towards you.

Move **silently.** This will require practice. Watch where you put your feet—don't break any twigs. If the ground is stony, it's a good idea to put your toe down first—if it's soft grass, put your heel down first. If you're on dry leaves, move quickly when the wind blows them.

Choose the right background. In Scout uniform you will blend in with the bush and undergrowth.

Make good use of anything that will hide you—trees, stumps, rocks, large clumps of grass. Here are some tips:



Don't forget practice is what you want. Use these skills in your Patrol games. Get Skip to teach you some games which you can play—Sleeping Pirate, Camouflage and, of course, wide games. Think some up for yourself.

TREE RECOGNITION

This is only really another part of observation. You will need to be able to identify six common trees for your your Second Class and twelve for your First Class. You will, I hope, find it an interesting hobby and in time learn to be able to identify many more than this requirement. The best way to start to learn the names of trees is to start your own tree book. (This is a notebook). A science Lab. book is a very good book to use. The stiff covers will protect it and you will be able to use the plain pages for sketches, photos or samples of leaves, bark and flowers, etc. Use a double page for each tree like this:

You will see that there is a space for the common name of the tree, its botanical name, what its height was, where it grew, and any comment you have about its burning properties. Remember if you take a leaf sample from a small tree, DON'T pick the top out of it as this can deform the tree. You should also look out for trees which have different leaves and habits when they are young from those which they have when they are mature. In this way you won't be fooled. The trees of New Zealand are part of our national heritage and you as an outdoor man should look after and respect them. Don't play about with an axe knocking the bark off. This can let infection into the tree just like a cut in your skin can let germs in. If you have to take branches off a tree it's a good idea to paint the scar with tar or paint to help the tree recover. Get your Scouter to tell you about the need for conserving the forests of New Zealand. You'll probably have been told about the Royal New Zealand Forest and Bird Protection Society. They publish a very useful magazine and you can get this by joining as a junior member for only 7/6 a year. It's full of information about birds and trees. Perhaps your Patrol could join.

Classification of Trees

Scientists have classified all known plant life according to the similarity of method of reproduction. Trees belong to the major group known as flowering plants (as opposed to the mosses, ferns and seaweeds which do not flower).

All trees and plants with exactly the same flower design and the same method of fruiting are grouped into what is known as a "genus" or family. Thus we have the *podocarpus* family—Totara, Kahikatea, Matai, Miro, etc.; the *dacrydium* family—Rimu. Within each family we have distinctive "species":

Genus	**Species**	
Podocarpus	*dacrydioides*	Kahikatea
	totara	Totara
	spicatus	Matai
	ferrugineus	Miro
Dacrydium	*cupressinum*	Rimu
	colensoi	Silver Pine

Remember when you see a botanical name the first name is the genus or family and the second name is the species. It's worth the trouble to learn the proper name. It's an interesting hobby and could lead you to the Woodcraftsman Badge.

We can't hope to give you all the information about all the trees of New Zealand in this book, but you should get a copy of some of the following books from your library:

"The Trees of New Zealand", Cockayne and Phillips-Turner.
"A Guide to the Trees of New Zealand", West.
"Native Trees", Hamlin.
"Trees and Shrubs of New Zealand", Poole and Adams.

And there are a lot more.

Here's some notes on one of our trees set out as you should do it in your Tree Book:

Name: *Dacrydium cupressinum*. Rimu —Red Pine.

Growth: Tall tree. Specimen estimated 40 ft high. Heights of up to 110 ft recorded. Up to 6 ft or more in diameter.

Bark: Dark and scaling brown.

Leaf: Leaves in scales with long branchlets hanging down.

Flower:

Fruit: Small nut on a red fleshy berry.

Wood: Reddish, turns brown when seasoned. Straight grained easily worked.

Burning properties:
What did you find?

BIRD RECOGNITION

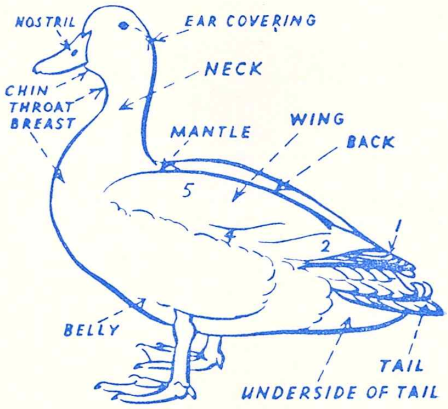
Bird watching is something you can do almost anywhere—at school, at home, on the beach and in the bush. Not the same birds are found in all these places, and you should first of all notice the different sorts of birds that are found in different places. If you are near a swamp, keep an eye out for the swamp birds—Pukeko and Bittern (Matuka). If you are near the sea, look for the Gulls and Terns and even Penguins. In the bush you may see Tuis and Bellbirds, Fantails and Waxeyes. Near a river, look for Shags and Kingfishers. You see there are many sorts of birds to look for in almost any place you are. Be observant and see them.

Here again you need a notebook, and a Lab. book is best. As with trees, so with birds. You can record all you see and include photos and drawings.

These are the things you should look for:

The size: Everybody knows how big a Blackbird is, so it's a good idea to use this size as a reference. Some books will tell you the size of a bird measured in inches from the tip of its beak to the tip of its tail. On a Blackbird this measurement is about ten inches so you can easily tell the size. Usually you will just say that the bird is twice, or half or just over twice, the size of a Blackbird and everyone will know what size it was.

The feathers: Notice both the colours and the pattern. In the drawing below the names of them are given.



The beak: Notice size, shape and colour.

The feet: Actually the feet are usually called legs, but a bird's legs are hidden under its feathers.

The legs: Long or short.

Unusual decoration: Watch for crests or tufts of feathers.

The flight: See if the bird flaps, glides, darts, or flies in little swoops.

The walk: See if the bird walks, hops, or runs.

The cry:

You may not be able to notice all these things when you first see the bird, but write down as many of them as you can, and keep looking. You should also keep a note of the date, time and place where you saw the bird.

Can you recognise this bird?

1. Slightly larger than a Blackbird.
2. Feathers, glossy black with greenish, bluish, and purplish reflections. Some white on the throat and bend of the wing.
3. Beak, black and curved slightly downward.
4. Wings and tail as usual.
5. Feet and toes, ordinary size.
6. White, feathery tassel on throat.
7. Flies rather noisily.

THINGS TO DO

Keep a bird calendar—list the birds you see each month.

Practise drawing birds—especially if one is your Patrol emblem.

Try to imitate birds and call them.

Put out a food tray or a dish of sweetened water or suet in the winter and make a list of the different kinds of birds that come there.

There is one more important thing. Scouts will try and find birds' nests, but you should never touch them. Taking eggs for a collection is definitely out.

journeys

For your Second Class journey you have to make a journey with another Tenderfoot Scout of eight miles. Your Scouter will give you some written instructions about what you are to do and you will be expected to make a verbal report to him when you get back. If your companion is taking the test, he will have to report independently.

Because you will have to make a report to your Scouter, it would be a good idea for you to make some rough notes as you go along.

Here are some ideas which will help you to pass this test:

- Go in uniform.
- Carry your gear in your pack—you know how to do it properly.
- Take your First Aid and Emergency Kit.
- Wear comfortable boots if you have them, and undarned socks.
- Take a notebook and pencil for your notes to remind you of what happened when you give your report.
- Make a sketch plan of your route, or at least part of it.
- Make use of simple sketches.
- By now you should be good at observation—use your skill to observe all the things of interest.
- Do the things you are asked to do in your instructions accurately.
- These are the other important details you should note:
  Weather—wind direction—vegetation: scrub, trees, crops—streams, lakes—any fish?—animals, houses—railways, diesel or electric?—local industries.
- Find time to do a good turn.

The First Class journey is a little more difficult.

Originally the rules for this test stated that you should go alone or with another Scout, but in view of the fact that in some parts of New Zealand it would be dangerous to go alone or with another Scout, provision has been made for you and two other Scouts to make the journey as a safety measure.

Your First Class journey should be an enjoyable adventure. It is not a test to see how far you can travel in the shortest possible time, or how big a load you can carry, or how good an essay you can write.

It is really a test to see whether you can put into practice the Scouting work you have learnt so far on your way to First Class,

whether you can fend for yourself for 24 hours and whether you can follow a set of instructions given to you in carrying out a task.

Your First Class journey should not be the first hike you have attempted—you will at least have done your Second Class journey and many more besides, but you should try yourself out over a similar distance before you attempt the real journey. The test journey itself should be over country that you are not familiar with, otherwise it won't be a real test.

On all your hikes you should be accompanied by another two Scouts, and for the test they may or may not be taking the test itself. If more than one of you is taking the test, be sure that you do the things you are asked to do by the examiner and that all of you do a fair share of the work.

SELECTION OF KIT

You will by now all know what to take with you, but you should give a little bit of consideration to reducing the weight you will have to carry. A small piece of soap and the bit in the end of an old tube of toothpaste will do, so why carry more? Don't carry more than you have to, but remember you will need a change of clothes; sandshoes do rest your feet in camp after wearing boots all day. One first aid kit for all of you should do. Share the tent and the camp gear among you—a hand axe will suffice. Don't forget your compass, map and emergency kit. Your total pack should not weigh more than 25 lbs.

While in full view of the public—on the bus or on a main road—you must wear full uniform, but camp shirt and shorts are permissible when you go bush.

Remember to pack your pack well. Check ALL your gear to see that it is in first class order.

FOOD

First of all, prepare a menu. This should be drawn up something like that given below. From the menu the ration list is made out.

Menu

Day	*Breakfast*	*Lunch*	*Dinner*
1		Soup Bread Butter Jam Cheese Tea Fresh fruit	Sausages Peas Beans Potatoes Stewed dried Apples Custard Tea
2	Porridge Eggs, poached Toast Tea	Apple fritters Bread Butter Jam Honey Dried fruit	

Select things that won't take a long time to cook or prepare. Avoid tinned food as this is too heavy to carry.

Pack all your dry food in rations bags—plastic or japara or in aluminium or plastic screw top containers. Carry the eggs wrapped in newspaper in a billy.

Ration List

Follow the scale set out on page 115, but remember you must include a note of your rations in your log, like this:

RATION LIST

Amount of food carried:

Item	*Quantity*	*Item*	*Quantity*
Bread		Potatoes	
Butter		Sausages	

READY FOR THE JOURNEY

You may be required to report to the examiner packed for the journey, or he may have given you sealed instructions with directions as to when you are to open them. In either case he will have inspected the gear and equipment you will be taking with you in your party, so all the party should report to him.

The instructions may be given to you all on one piece of paper or they may be in two envelopes, one for the first day and one for the second. The examiner will see that you have a suitable map for the area before you start.

When you open your instructions, read them through **carefully** several times, so that you fully understand what the examiner wants you to do. Study the map and try and plan how long you are likely to be in getting to the camp site, and so on. You can then judge your progress as you come to each landmark in turn. Most probably your effort will be a partnership, so work out at the start who will be doing what. Of course, you will have to keep independent notes for your logs, but you can still work together on some of the details.

ON THE TRACK

As you proceed, keep rough notes of the details of your journey—particularly the time you reach different landmarks. This is harder than you think, so take care with it. These notes should be such that you will understand them when you make up your final report, perhaps some days after you get back.

If you have to go through scrub or bush, make sure you keep together. Remember you are moving as a unit.

The examiner will probably have told you to make camp in a particular area, but he will leave it to you to select the best spot for your own camp. Make camp before it gets dark so that you can check the water supply, collect the firewood and get your tent well pitched. Take some care with your bed—watch the local fire regulations regarding your fire—for preference use an existing fireplace or make a suitable one. Don't forget what you have learned about camping and make sure you have dry wood for the morning. Don't turn in until you have washed up **all** the dishes, washed your-

self and cleaned your teeth and had a short Scout's Own. Early to bed is the rule, and not too much talking.

The Second Day

Get an early start—don't forget to clean up the camp site, and if the tent is wet pack it loosely on top of your pack so that it won't get mildewed. Remember you should make a rough sketch of your camp site. See that your fire is out.

All set? Then on to the tasks of the day.

LOST

Remember that if you get lost, or become overdue, you may cause people risk and trouble in searching for you.

If you think you are lost, don't panic—sit down and think it out. Look at the map closely, and remember that you can't have gone far since you knew where you were. Work on a plan, and stick to it, mark your trail very plainly with large signs. Don't get separated from your pack—keep it with you all the time. Remember, with your map and compass you will soon find out where you are.

ACCIDENT

If one of your party is injured the leader or most senior Scout should take charge. He will have to decide what to do. One of you will have to stay with the injured person while the other goes for help. Think it out very carefully. Probably the most experienced tramper is the one to send out even if that is the leader, but the Scout left behind must be able to take care of the injured one and must be given instructions as to what he is to do. In any case the message carried should be written. Remember to leave a good supply of wood at the site of the injury and establish a camp before the party splits up. A smoky fire is a very good signal and you should refer to the emergency signal on page 159. Make sure you mark the trail well as you come out with large signs.

If darkness overtakes you and you are not on a clear track, it is better to camp for the night and continue in the morning.

Don't forget that you should get in touch with the examiner as soon as you are back to let him know that everything is O.K.

THE LOG

The purpose of the log is to serve as a record of your achievement to which you can refer later, and from which the examiner can tell whether you did what he asked.

The aim of the report should be to tell a person who does not know the route enough information for him to be able to follow your journey himself.

You should get a fairly substantial book, which will become your personal hike log. Your First Class journey will eventually be only one of many hikes that you do, and these logs will help you when you wish to take some of the outdoor Venturer badges.

Start writing up your log from your rough notes as soon as you can after you get home and while things are fresh in your mind.

There is no official way of writing the log. Here's one idea, but you don't have to follow it slavishly.

To: Mr. J. Smith, D. f. North District, Wellington.

LOG OF FIRST CLASS JOURNEY

MADE BY:- Harold Richards, Second- Tui patrol, Craigside Troop.

ADDRESS:- 16 Mill Road, Craigside, Wellington, N.Z.

DATES:- Saturday, 14th April and Sunday, 15th April, 1954

MAP:- 1" Survey Series, Sheet No. 62 (N.Z.)

ACCOMPANIED BY:- John Sanders, No 3 of Ruru patrol, Craigside Troop.

OUR CAMPSITE.

TIME	MILES	LOG
		Saturday - April 14th.
1108		Left WELLINGTON by tram with instructions to be opened at WAIKANAE Station.
1250		Arrived at WAIKANAE opened instructions and studied map
1300		Took MANGAONE Road running N. East from local store. Road winds through pleasant open country with some hills. Passed several farms - mainly sheep and some cattle.
1340	2	Reached end of road. Took track through McMAHON's farm on South bank of the WAITAWA river; descended into gully crossed river on suspension bridge (see sketch - page four) at M.R. 619328. Thick bush on river bank. Saw TARARUA range to N.E
1410	3½	Track turned North up steep bush slope. Sleepers of old bush railway visible in places. Only a foot or horse track here.
1435	4	Came to open grassy flat. Obviously site of sawmill. Ate biscuits John discovered a

These things ARE important:

- In the beginning of your log it should say BY WHOM and FOR WHOM it is written.
- State the map used, with its correct reference number.
- Note the time of arrival and approximate distance covered at key points on the route.
- All names should be printed in CAPITALS.
- Show separately:
  (a) List of equipment and food carried—including quantities.
  (b) Details of meals.
  (c) Brief description of the weather.
  (d) Reports on whatever your examiner asked you to do.
- Illustrate your log with sketch maps of your camp site and any portions of the route which might be difficult to follow.

Remember you will have to do these rough sketches in your rough notebook.

A word about sketch maps and drawings. A sketch map, though not necessarily accurate, is a map. Therefore draw it as a bird's-eye view and not as you see it. The detail can be completed in your log, but be sure to fix the position of things and as far as possible the right direction of your route and the tracks or rivers or boundaries it may cross. The map in your rough notebook might not be clear to other people, but at least YOU must understand it, so that you do not have to rely on memory when making a neat sketch map in your log. Always show the north point on your map and the approximate scale.

The same principle applies to drawings. You might not have time on the journey to complete a drawing of something, but at least get its shape and write in important details, such as the position of doors and windows (if it's a building), the number of supports—having drawn one (if it's a bridge), and the colours of that unknown bird you saw.

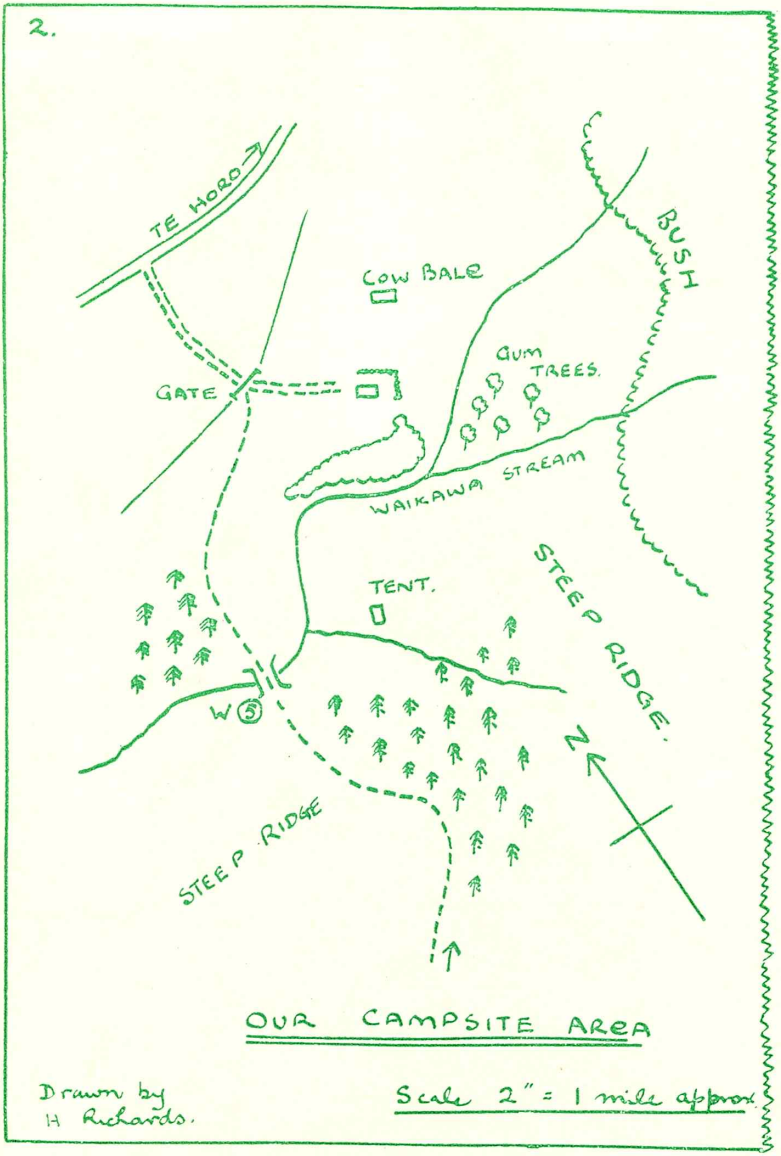
If you put your best effort into making your log, you will always treasure it as proof of having done something really important.

. . . and Right Ahead

Now that you're a First Class Scout you will be wanting to put your knowledge into practice. The very best way you can do this is to join a Venturer Unit and to enjoy the fun of learning a lot more while you are using the knowledge you have. All your Unit will be planning to get their Queen's Scout Award and the wide choice of possible badges adds to the challenge and satisfaction of planning and achievement. This is Scouting's highest honour and is gained only by the very best Scouts. You will want to try and achieve this standard also, to make you more useful to other people, prepare yourself for your life and to begin to learn how to be a leader. To achieve these things you will have to carry on through disappointment and hardship but you now know that a Scout never gives up.

Good Luck—and Good Venturing!

2.



OUR CAMPSITE AREA

Drawn by
H Richards.

Scale 2" = 1 mile approx.

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